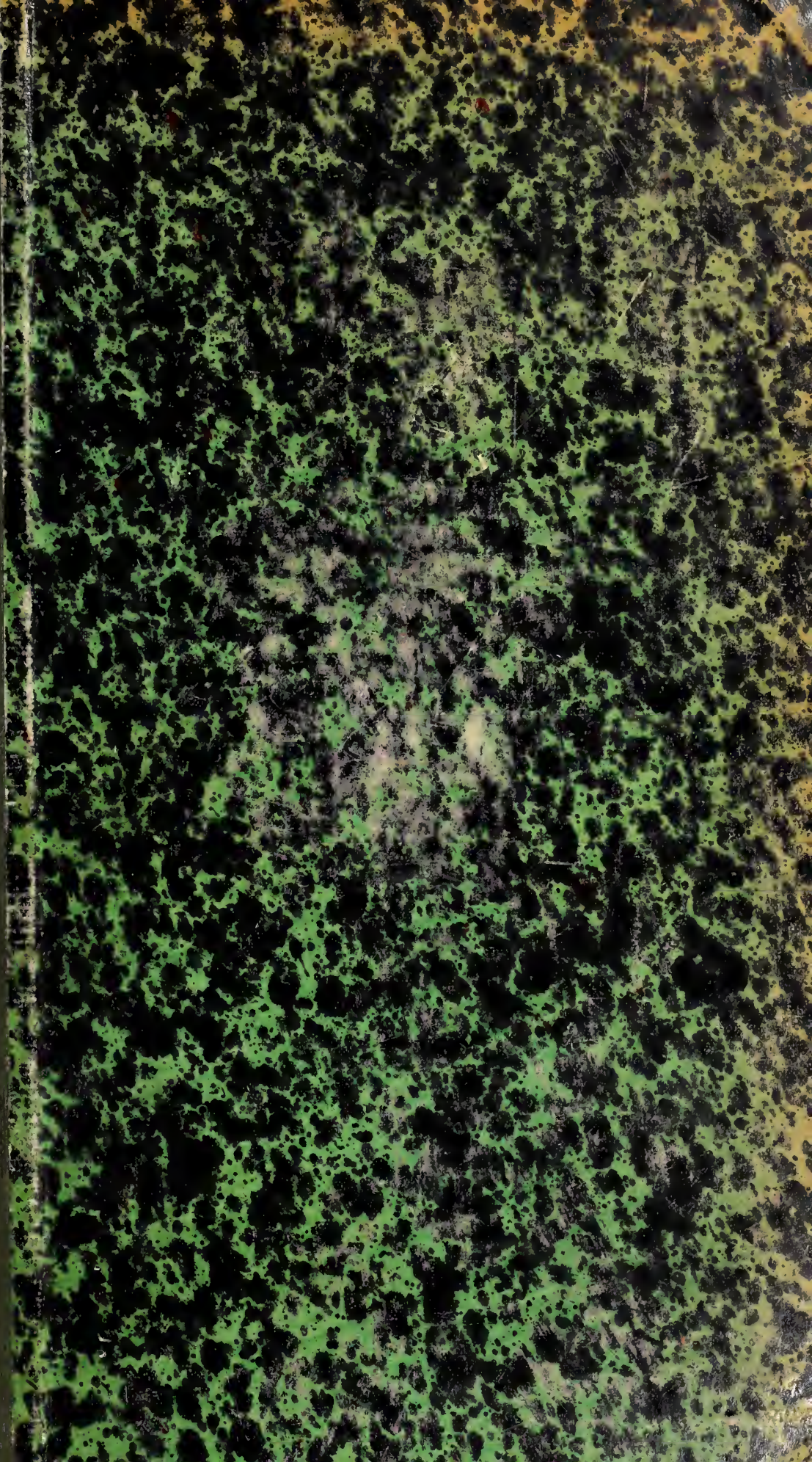


COUNTWAY LIBRARY



HC 3188 N



*BOSTON*  
*MEDICAL LIBRARY*  
*& THE FENWAY*











Digitized by the Internet Archive  
in 2016

<https://archive.org/details/journal1419miss>





# **THE JOURNAL**

OF THE

## **Missouri State Medical Association**

THE OFFICIAL ORGAN OF THE STATE ASSOCIATION AND COMPONENT SOCIETIES

ISSUED MONTHLY UNDER DIRECTION OF THE PUBLICATION COMMITTEE

---

PUBLICATION COMMITTEE

W. H. BREUER, M.D., Chairman

SCOTT P. CHILD, M.D.

M. A. BLISS, M.D.

---

E. J. GOODWIN, M.D., Editor

OFFICE OF PUBLICATION, 3517 PINE STREET, ST. LOUIS, MISSOURI

---

### **INDEX TO VOLUME XIV**

JANUARY, 1917, TO DECEMBER, 1917





# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies

Issued Monthly under direction of the Publication Committee

ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

JANUARY, 1917

Number 1

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION COMMITTEE { W. H. BREUER, M.D., Chairman  
S. P. CHILD, M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### CHRONIC INDURATION OF THE PENIS

ARTHUR E. HERTZLER, M.D.  
KANSAS CITY

By chronic induration of the penis is meant an affection which is characterized by a slowly progressive formation of fibrous tissue in the dorsum of this organ. It begins usually near the root and advances toward the glans, but may begin near the glans and extend proximad. It usually spreads out flatwise over the dorsum but may extend deeply into the septum. It is painless and noninflammatory, and after reaching a certain size it does not progress. It may cause some burning but its chief significance lies in the fact that it causes impotence because of the exaggerated curve of the penis during erection, due to the mechanical interference of the scar tissue.

Though this disease has been known in France since La Peyronie<sup>1</sup> first described it, in other countries it was not recognized until a much later date. Ricord<sup>2</sup> nearly a century later redescribed the disease and attempted to define its etiology. He suggested three causes: inflammation, syphilis and trauma, and two years later made a separate classification for those which could not be placed in any of these categories. This class, it may be said, is, according to the present viewpoint, the only one which, strictly speaking, represents this disease. Those due to either inflammation, trauma, or venereal disease should not be included in the group under discussion.

Van Buren and Keyes<sup>3</sup> was the first to describe it in this country, and by virtue of this

priority it was known to the early surgeons as Van Buren's disease.

Of the etiology of this restricted group but little is definitely known. The prevailing theory is that it bears some relation to rheumatism and gout. Kirley<sup>4</sup> was the first to suggest such a relationship. He noted this affection in a gouty patient who had nodules in the palmar fascia and tendon sheaths. Paget<sup>5</sup> classes it as one of the minor signs of gout. Verneuil<sup>6</sup> agreed with the gouty theory and suggested the relation of induration of the penis to diabetes as well. Tuffier,<sup>7</sup> in a study of twenty-six cases in which a urine examination had been made, found eleven that showed diabetes. In Sachs's<sup>8</sup> statistics of 187 cases, forty-four cases showed diabetes and an equal number presented evidence of gout, while in a nearly equal number of cases no etiological factor could be determined. Stein<sup>9</sup> more recently called attention to the association of this disease with Dupuytren's contraction. The association of Dupuytren's contraction with gout had previously been noted by Paget<sup>5</sup> and Hedges.<sup>10</sup>

**Symptoms.**—The clinical manifestations of plastic induration of the penis are exceedingly characteristic. It begins usually in men past 40 years of age. Usually a burning or a recurvation during erection first causes the patient to present himself for examination. Examination shows an induration, usually near the symphysis. Sometimes several nodules begin simultaneously which afterwards become confluent. Rarely does the first manifestation begin near the glans. The induration continues until it gains a length of several centimeters or

4. Kirley: An Unusual Affection of the Penis, Dublin Med. Press, 1849, xxii, 210.

5. Paget: The Minor Signs of Gout in the Nervous System and the Genito-Urinary Organs, Brit. Med. Jour., 1875, i, 702.

6. Verneuil: De l'induration du corps caverneux de la verge et de ses rapports avec glycosurie, Bull. et mém. Soc. de chir. de Paris, 1882, viii, 826.

7. Tuffier: Sur l'induration des corps caverneux, Ann. d. mal. d. org. génito-urin., 1885, iii, 401.

8. Sachs: Wien. klin. Wchnschr., 1901, xxiv, iii.

9. Stein: Wien. klin. Wchnschr., 1909, xxii, 1821.

10. Hedges: The Relation of Gout, Rheumatism, and Dupuytren's Contraction of the Palmar Fascia, St. Bartholemew's Hosp. Rep., 1897, xxii, 119.

1. La Peyronie: Sur quelques obstacles qui s'opposent à l'éjaculation de la semence, Mém. de l'Acad. de chir., 1745, i, 423.

2. Ricord: Du sarcocèle syphilitique de l'induration des corps caverneux, Bull. gén. de therap., 1840, xix, 218.

3. Van Buren and Keyes: Chronic Circumscribed Inflammation of the Corpus Cavernosum, New York Med. Jour., April, 1874.

more, and a breadth of half as much (Fig. 1). Sometimes, however, the extension is deeper. A cross-section of the indurated area in such cases presents a T form. Those which were said to have caused occlusion of the urethra did not belong to this disease but were due to some inflammatory trouble. The second case reported by Morris<sup>11</sup> may have been such a case, however, though it is not probable since the patient had had gleet.

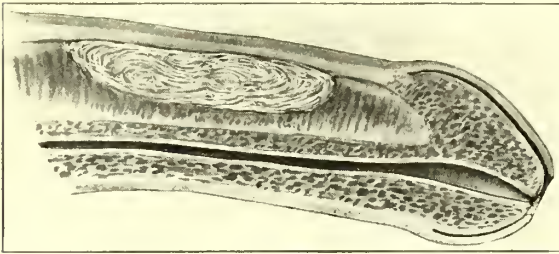


Fig. 1.

The tumor is attached to the capsule of the corpus cavernosum but the skin always remains free from it. The corpora cavernosa are usually not directly invaded but in one of my cases these bodies contained processes of the lesion.

On inspection nothing can be discerned when the organ is flaccid. During erection there is a sharp upward curve so that the glans approaches or strongly imbeds itself in the abdominal wall. In some instances the deviation is said to have been laterally as well as upward. On palpation the induration is readily perceived. The feel is a dense elastic one, exactly like that of a keloid.

Subjectively the disturbances are not great. Some spontaneous smarting or burning has been complained of. This is heightened during erection, sometimes to actual pain.

The chief disturbance caused by the disease is that of impotency due to purely mechanical factors, less often to the actual pain present.

*Pathology.*—In a few cases cartilage, calcareous infiltration or actual bone formation has been noted. In most of the instances noted the induration was composed of dense fibrous bundles with sparse spindleform nuclei (Fig. 2). In their structure it is interesting to note that they closely resemble Dupuytren's contraction, the clinical relation of which has already been noted. In structure this tissue resembles keloids as closely as it does in its physical characters. In those in which calcareous infiltration has taken place fibers are not disturbed and if decalcified present the picture of the simple form.

But two cases of bone formation have been reported.<sup>12</sup>

*Course.*—The duration of onset varies between four months and one and a half years. In one of my cases it was well marked after three months. Considering the histologic structure the progress is relatively rapid, here again bearing resemblance to keloids. When once fully formed progress ceases but the condition remains permanently. In this it parallels Dupuytren's contraction.

*Diagnosis.*—The disease is so characteristic that but little difficulty should be experienced in recognizing it. The slow onset, the peculiar feel, and the potential limitation in the function of the organ it causes, establish the diagnosis.

It must be differentiated from trauma, gonorrhea, syphilis, and tumors. From trauma it is readily differentiated by the history. From gonorrhea it is differentiated by the situation. Gonorrhea usually involves the periurethral tissue, which remains free in plastic induration. If the corpora cavernosa are involved in the gonorrheal process a painful cavernitis results which in no way resembles this disease. Gummata have been noted but a few times.

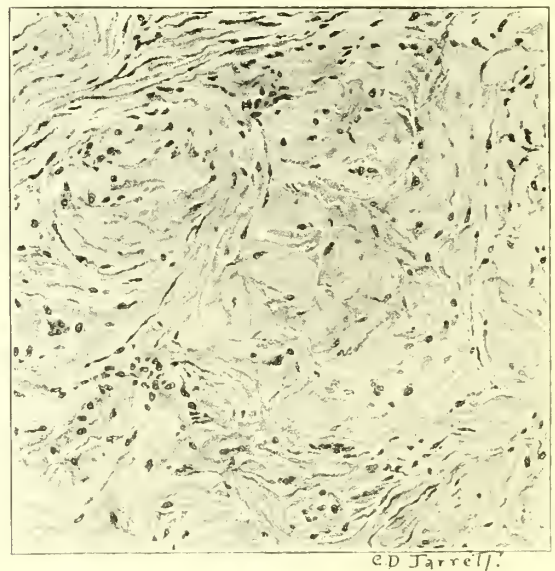


Fig. 2.

They do not cause the deformity during erection and tend early to ulcerate. None has been reported occupying exclusively the situation described as characteristic for plastic induration. Malignant neoplasms have been noted a few times in the corpora cavernosa, never in

11. Morris: Two Cases of Induration of the Erectile Structures of the Penis Causing Retention of the Urine, *Lancet*, London, 1895, lxiii, 673.

12. V. Lenhossik: Knorpelähnlichen und wahre Knochenbildung in männlichen Gliede eines Erwachsenen, *Virchows Arch. f. path. Anat.*, 1874, lx, 1. Chetwood: Presentation of Pathological Specimen of Ossified Plaque of the Corpora Cavernosa, New York Academy of Medicine, 1899.



the situation characteristic for plastic induration.

*Treatment.*—But two plans of treatment deserve consideration, Roentgen ray and operative. Judging from the excellent results obtained by the ray in keloids, and the histological resemblance of the disease under consideration to the keloids, benefit from the ray was to be hoped for. These hopes have not been realized. Walters and Colston<sup>13</sup> treated three cases without result. Blonasconi<sup>14</sup> reports a cure, and Zur Verth and Scheele<sup>15</sup> report one cure in three cases treated. Operation shows better results. Galewsky and Hübener<sup>16</sup> were the first to report a cure by this means. Zur Verth and Scheele in a collection of statistics of fourteen cases, eleven of which could be traced, record eight cures, one improvement, two no improvement. Walters and Colston<sup>13</sup> record additional cures of one each operated by Bloodgood and Young. My two operated cases had anatomic cure with functional improvement, though one can hardly speak of a cure in either case. The patient (Case 3) who received one treatment by the Roentgen ray was not improved. This is not to be wondered at since Bernasconi's case required eighteen treatments in order to complete a cure. From the foregoing it is evident that any line of treatment is unsatisfactory. Perhaps radium will be more successful than the Roentgen rays. At any rate, my next patient will receive that treatment.

The following cases have been observed by me. Their interest lies in the general failure of treatment instituted and in the fact that melancholia does not always attend the condition. Case 2 was quite satisfied when assured that his life was not endangered; Case 4 regarded the condition as a joke; Case 5 philosophically regarded the condition as a moral safeguard, while Case 6, with equal resignation, regarded his busy professional life as a just compensation. The etiological relations of three of the cases is interesting. Case 4 had a marked Dupuytren's contraction, Case 5 ascribed violent erections as the causative factor, while Case 6 is of a gouty diathesis.

#### CASE REPORTS

CASE 1.—Aged 63, jurist. Large portly man. First noticed induration six months before. Complaints of no spontaneous pain, but has been impotent for some months because of recurvation during erection. Induration extends from near the pubis distally for 3 cm.; laterally it is 15 mm. in width and extends deeply into the septum (Fig. 1). The tissue removed was entirely fibrous, long search being required before

a cell could be found. The treatment stopped the burning on erection, but did not restore the function.

CASE 2.—Aged 56. Very well-nourished business man. First noticed a difficulty in erection six months before and on examination noted the mass now presented for inspection, which, in his judgment, was then nearly as large as at the time of examination. The mass was about the size noted in the preceding case. No treatment was attempted, since the assurance that it was not a malignant tumor satisfied him fully.

CASE 3.—Aged 53. Since seven months ago has had burning and stinging during erection. Just recently an annoying upward curving has begun to take place. The mass presented by this man was less than in the cases of those previously mentioned. Since the disturbance was as yet not complete, this case was probably in the course of development. He received one intensive treatment with the Roentgen ray without result.

CASE 4.—Tall, angular man, aged 78. While treating him for a gastric disturbance I noticed a marked Dupuytren's contracture which he said was of twenty years' duration. Being acquainted with the relation of this disorder to the plastic disease of the penis, I requested the privilege of making the interesting inspection. True to my suspicion, an induration beginning near the pubis and extending distally for 4 or 5 cm. in length with a width of 1 cm. was found to be present. He said that the mass had been present for many years, but since he had been a widower for a still greater period of years he was not conscious of any physical disability. In fact, he stated that he would regard a cure as an unfriendly act, for he regarded it as an advantage, since it made the necessary manipulations preparatory to urination more simple, particularly in cold weather.

CASE 5.—Aged 58. Since two months ago he has noticed recurvation of the penis on erection. There is severe pain during erection, but none when the organ is in its flaccid state. He gave as an etiologic factor ungratified sexual desire. He said that he had lived a passionate life with his wife for many years. She suddenly developed an aversion, which compelled continence on his part. The pronounced erections caused pain long before the tumor mass was noted. He ascribed the tumor mass to a rupture of the tense veins. His induration was the smallest of the cases heretofore observed by me, being but 2 or 3 cm. long and half as thick without any septal prolongations. He assures me that the deformity produced is now so great that copulation would be mechanically impossible should opportunity offer, though desire is as great as ever. A statement of the prognosis of the affection caused him to decline treatment. He stated that considering his present domestic relations the condition might be regarded as an advantage since it served as a check toward any deviation from moral standards.

CASE 6.—Aged 40. Physician of 220 pounds in weight. For some months has felt a stinging back of the glans when the penis is flaccid as well as during erection. He states that his sexual desires have always been moderate. He volunteers the information that he came from a gouty family, his mother being a sufferer, and that he himself had recently become stouter with some pain on motion. His tumor is situated immediately proximal to the glans and is 1½ cm. in length, with a thickness and width of about half this dimension. From the main mass smaller prolongations extend laterally. This extension proved at operation to extend directly into the left corpus cavernosum. The results of the treatment have been negative, though likely the procedure served to stop the process.

Rialto Building.

13. Walters and Colston: Surg., Gynec. and Obst., 1915, xx, 41.

14. Blonasconi: Rev. clin. d. Urol., January, 1912, p. 53.

15. Zur Verth and Scheele: Deutsch. Ztschr. f. Chir., 1913, cxxi, 298.

16. Galewsky and Hübener: Munchen. med. Wchnschr., 1902, xlix, 1332.

# RELATIONSHIP OF LACERATION OF THE MOUTH OF THE UTERUS TO CANCER OF THE UTERUS\*

ROBERT M. FUNKHOUSER, M.D.  
ST. LOUIS

That some form of cancer has always existed there can be no doubt. It is very difficult to determine how frequent it has been in the past or is at the present time. That it is a menace is not only a theory but a fact. In the United States between 75,000 and 80,000 persons die annually of this disease. The mortality in the world from this disease is over one half million people. Perhaps it will not be amiss to give a short résumé of the subject of cancer to date. The literature of statistics of cancer is enormous, but of very unequal and uncertain value and nowhere else does the confusing conflict of truth and fiction appear to stand forth more prominently. It has been stated that in one country it is rare because there the people are habitual bathers or because they are confirmed rice eaters; that in another it is also rare because of vegetarian diet. Some biologists draw a close comparison between the higher plants and the higher animals, but as a whole they do not approve of this, as there is not a logical parallel between the propagation of cancer by implantation or grafting on other animals and the grafting of plants, in that in the one there remains a single tissue and in the others there is produced from the vegetable grafts flowers and seed.

So far no essential cause of cancer has been established. The evidence has not proved that man may acquire cancer through the consumption of animals suffering with the disease. But this does not mean that careful inspection of all animals used for food should not be thoroughly made, for malignant neoplasms in animals are subject to degeneration and to mixed infection with organisms which may be communicated to man.

By the generous publications in magazines and the daily press the extremes of opinion as to the parasitic or dietetic origin of cancer have increased and been accentuated, so that the public alarm and fear of the disease has become almost a phobia. It has been pointed out that malignant new growths, like other diseases, occur more frequently at necropsies than has been supposed, as Bashford and Murray have pointed out in their "The Statistical Study of Cancer," and the contrary occurs that persons who have been supposed to have died of cancer have died of some other disease. The statis-

tics show, with the exception of the uterus and breast, that there is some period of life, generally the same for both sexes, at which cancer of any particular organ is especially characteristic. The reproductive system holds an exceptional position for the female sex; the uterus being the principal seat of the disease up to 65, the stomach from 65 to 75, and the breast after 75. The total mortality from cancer of the uterus is much higher than that from any other organ in either sex and more than half of the victims are under 55 years of age. For cancer of the breast 40 per cent. are under 55. From 22 to 36 per cent. of all deaths of women from cancer are due to cancer of the uterus. It has been proved that it is not a filth disease as advanced by Parks. It conforms to other laws than those governing the occurrence and spread of filth diseases in the community. The highest cancer death rate occurs, not in the slums, but in the wealthiest residential sections.

After the inauguration of sanitary reform it was noticed that the statistics of mortality of cancer did not diminish as did the mortality from epidemic diseases. The question naturally followed, was the increase in the number of deaths recorded real or only apparent? What is different in the life of the cow and the mouse now, when thousands of cases are on record, as compared with what was known of them ten years ago? Investigation shows that cancer in them is just as frequent as ever, and in the past wrong diagnosis has been at fault or the disease has been overlooked. Why has the disease of cancer increased, according to statistics, in Japan although the habits of the people have not changed?

The statistics fully demonstrate that it is erroneous to make statements of a disquieting nature about the increase of cancer in general. This study of the disease is valuable by proving what cancer is not, as well as proving what it is. All races are liable to the disease, irrespective of diet, soil or climate, although the question of relative liability in different parts of the world and of different races has not been settled. It has shown the importance of chronic irritation in the distribution of cancer due to peculiar practices, dependent on native customs and occupations; that there is a relation between cancer and age, that it is rare under 35, but frequent after middle life, and that the age incidence differs for different organs, but is the same for the same organ in the two sexes, of course with exception of the uterus and breast.

There has been a great increase in the total number of deaths recorded from cancer, partly due to the improved certification of causes of death and improved diagnosis and also because people are longer lived nowadays than formerly. This must not be confounded with the question of relative increase. There has been no relative

\* Read at the 59th Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 8-10, 1916.

\* Much of the information presented in this paper has been obtained from the works of Bainbridge, Hoffman and other writers of the day.



increase for some parts of the body, namely, the skin, the uterus, the ovary, the liver, but that for other sites, notably the stomach, the intestines, the breast and tongue there has been a relative increase. Whether this relative increase is real or only apparent has not yet been decided. There is some probability that much of the increase for the stomach and intestines may be explained by improved diagnosis and certification of causes of death, due to improved methods of surgical diagnosis, but for the tongue and breast this would hardly obtain. In case of cancer of the breast what has been the effect of the increase of the inability of women to nurse their children, or of the refusal of mothers to nurse their children? Heredity no doubt plays a rôle, but to what extent is not determined. So far, all theories advanced, constitutional, parasitic, or strictly cellular, are insufficient. Even a satisfactory working explanation of the nature of cancer has not yet been discovered. Modern experimental investigation of cancer has thrown much light on the predisposing factors in the production of cancer, but the essential cause as yet is undiscovered. The most practical outcome of this study is the emphasis to be placed on the removal of all possible sources of irritation. The development of the knowledge concerning the histopathology of cancer and the experiments which have proved the transplantability of cancer tissue have established beyond question the necessity of the complete surgical removal of the primary forms, which will result in the eradication of the malignant process and in the cure of the patient, if instituted early enough.

So far the modern experimental study of cancer has failed to establish its etiology. Thiersch was the first to shatter the belief in the humoral nature of cancer, followed by the exploded idea of an inherited dyscrasia or condition of the blood. So that now it is agreed that cancer is local in its beginning. Only by experiment supported by knowledge previously acquired through morbid anatomy and histology has it been possible to come to certain unequivocal conclusions, as, for instance, the "individuality of cancer established by experiment." This has been claimed from histologic examination of the tissues at the site of the primary lesion and on those of the nature of the secondary or metastatic formations. The parasitic advocates denied this.

In view of the laboratory and clinical work, it is very apparent that the source of irritation should be removed.

It has been estimated that from 97 to 99 per cent. of the cases of cancer of the uterus are in women who have borne children, or, to express it differently, in those in whom the organ has been injured. It is not necessary on this occasion to go into the histologic, pathologic

changes that occur in situ and surrounding tissues; suffice it to say that it is generally accepted now that cancer of the os uteri is due to trauma and irritation and that the sooner the irritation is removed after the trauma has occurred, the safer will it be for the patient. Though much has been accomplished by the agitation of the subject, much more can be done, particularly along certain lines. It is incumbent on the physician to state to his patient or to the family the true seriousness of cancer as it is understood today. It should not be needlessly exaggerated. Some writers aver that the subject cannot be exaggerated, that the returns so far indicate uterine malignancy is increasing, etc. I find that for the most part patients will cooperate with their adviser. The doctor's duty is educational—that of a missionary—and this educational work must not be confined alone to the patient, but extend also to the doctor. Too often the doctor meets with patients who are unwilling to submit or very reluctantly submit to an examination. I am in the habit of advising a periodical examination of those who have reached 30 years of age, even when the person has no symptoms and no complaints.

Just as soon as a tear of the uterus is discovered it is the duty of the physician or surgeon to advise the removal of the irritation or trauma and sew up the parts, not only of the uterus, but of the vagina; so the points I wish to emphasize are the more frequent and earlier examination of women, even when there is no apparent or even suspected trouble; and the removal of the irritation, that is, the repair of the uterus as well as the vagina.

4354 Olive Street.

#### DISCUSSION

DR. C. LESTER HALL, Kansas City: This is an ever-repeated question, a question that you cannot dismiss, a question that you cannot treat lightly and pass over as a bugbear or as a scarecrow on the part of the profession. It has long since been demonstrated that cancer does not depend on the Cohnheim theory that once a cancer, always a cancer. It was demonstrated by Emmett first, I believe, in this country, that a laceration of the cervix following confinement was the most fertile source of cancer of the uterus. That teaching is good today and we should constantly be on our guard as practitioners and as surgeons and more especially as obstetricians, to see that this condition does not follow confinement.

The fact is that as obstetricians we have all been careless in overlooking the importance of an examination of every woman after every confinement to see what the condition of the cervix is. Some one has advised that all lacerations of the cervix should be repaired immediately after confinement. It must be apparent to those who have practiced intelligently that that is very poor practice for the reason that you cannot tell the torn from the untorn part in a majority of cases after confinement. What appears to be a laceration may not be a laceration at all and therefore those who repair indiscriminately the cervixes after confinement are very apt to sew up healthy tissue.

But it is important that whenever, in the course of seven or eight or ten weeks, after involution has been completed, it is very important then that the woman should consult her attendant and determine whether there is or is not a laceration; and after this condition has been determined and circumstances are favorable for the repair it can be done and done early enough to prevent such consequences as the doctor refers to.

There is one point in regard to this early repair of laceration of the cervix which we are often in danger of overlooking, and that is that nature herself repairs a great many of the lacerations of the cervix, utilizing the anatomic relationship, such as the muscles to pull the lacerated surfaces together. They are often repaired without an operation, often repaired before you have determined that there is a laceration. I have seen cases, and the number is not so inconsiderable, in which the scar resulting from the healing of a laceration of the cervix by nature was as beautiful as any surgeon could have produced with the knife. Therefore, it is well to see if nature has made this repair before you subject a woman to an operation; certainly to a very early operation. It requires time after confinement to settle this question.

But there, again, lies a danger. There is danger that men will say that nature will do this. That is begging the question. We should not expect too much of nature. Give nature an opportunity, but do not defer the necessary steps for the repair of the cervix if it continues lacerated after involution has taken place.

I am satisfied that the anomalies of menstruation are not sufficiently taken into consideration. What I mean is this: When a woman does not menstruate normally, when she shows any anomalies, especially toward the menopause, when she has irregular menstruation; that is often the death knell of the woman. It has been a habit of physicians, especially of the older practitioners in the country, to regard hemorrhage that occur about the time of the menopause as absolutely normal. Nothing could be farther from the fact. Nothing could be so pernicious and dangerous. We must know the cause of anomalies of menstruation, of irregular menstruation. Each must be taken into consideration, careful consideration, and a close examination made. By taking the history of the case, sometimes the history of the antecedents, because menstrual peculiarities sometimes come down from mother to daughter, light on the case may be obtained.

I am sorry that I am going to be knocked down after a five minutes' speech. There is nothing that I could talk to you on in which I feel more deeply, than I do on this subject; there is nothing on which we should be more cautious. We often have women come to us saying that they are undergoing the menopause. A woman came to me not long ago, a woman of 39, saying that she had been told by an old woman that she was having "change of life." I told her something ought to be done to that old woman, and I cut out a piece of the cervix which looked ragged, and submitted it to microscopic examination. That examination proved beyond question that it was cancer. By early operation I was able to save that woman's life. This subject cannot too often be called to the attention of the public. Doctors cannot insist too much on thorough knowledge of the condition of their patients.

DR. T. J. BEATTIE, Kansas City: I believe that a large percentage of cases of cancer of the cervix are due to local irritation in the beginning. I believe that it is due in many cases to neglected lacerations of the cervix; but if every woman who has a lacerated cervix, or who has had a lacerated cervix, should be operated on as a preventive measure against cancer, then every woman who has had a child, or 99 per

cent. of them, ought to be operated on. Now I do not think that is necessary. I believe there are very few cases in which a woman who has had a miscarriage or labor at term has not been lacerated, and I believe that it is those neglected cases of laceration that are most likely to develop cancer. Yet it seems to me that there are many cases, as Dr. Hall has just said, in which nature will repair a laceration and it will be as harmless to a woman as if she had had the laceration repaired if the repair has been extensive. Why? In the case of a woman who has had a laceration of the cervix repaired you will find a certain amount of scar tissue. That is just as likely to be a point where development of cancer might occur as if it were not repaired, unless it is one of the cases in which there has been quite an extensive laceration that has not repaired itself. We all see cancer of the cervix or cancer of the body of the uterus occurring in women who have had very slight lacerations, and those nature has largely overcome; or in those who have never borne children at all. I have seen two cases in women 27 years old, who were unmarried. That does not mean that it is the rule for these cases to develop in unmarried women, or in women who have not borne children. We know the large percentage of them develop in women who have had children.

I believe these cases should be watched. "Change of life" is a term often used to cover something the doctor is not clear on. When a woman comes to a doctor and has hemorrhages or menorrhagia, and the doctor is satisfied with saying she is in the "change of life," it may be a very great misfortune for that patient, because such a patient ought to be examined carefully. And, as Dr. Funkhouser has said, they should be examined periodically, so that if a suspicion of malignancy should develop a curettement may be done and ought to be done, or a piece nipped out of the cervix, and the scrapings examined microscopically. I have a few women who come to me two or three times a year to see if they have cancer developing, so that in case they should have something that would arouse suspicion they can be taken care of in time. This is a very important subject and one that is always to be emphasized in the minds of the physicians and especially with the general practitioner.

DR. J. F. WELCH, Salisbury: There is one thing that I wish to emphasize more particularly than any other, and that is in regard to periodic examination to ascertain the condition of the uterus. I think there is more to that suggestion than to any other in the doctor's paper. Of all his points, I think that is the one that should stand out preeminently above any other, that we should be watchful, and that the only way in which we can be watchful is by making observations. We cannot tell from what our patients tell us what the condition of the uterus is. Why, many times our patients will be well advanced in a cancerous condition when they exhibit very few symptoms, very slight symptoms as they will demonstrate them to us. Usually it is a secretion, whether it be of leukorrhea, or of sanguineous nature, that first gives us a suspicion of something being wrong. But if we make the observation that Dr. Funkhouser has recommended, we shall overcome those conditions and they will fail to progress to cancer and we shall many times save the life of our patient.

My experience has been considerable along this line. I have had a good deal to do with conditions that develop from neglected conditions of the cervix, and I have a few cases to my record in which I am proud to say I have observed the condition early enough to save the patient's life.

4354 Olive Street.



# THE NONGONORRHEAL TYPE OF OPHTHALMIA NEONATORUM \*

J. H. THOMPSON, M.D.  
KANSAS CITY, MO.

Since the introduction of Credé's method of prophylaxis and Howe's propaganda for the popularization of the cause and prevention of ophthalmia neonatorum, this disease has become less and less common; so much so, that it is now seldom seen among the better class of people, and can only be studied in the general hospitals and large dispensaries. Obstetricians and nurses are so well informed by the medical press that they do not now hesitate to introduce immediate measures for the protection of the child's sight, especially if there is any suspicion of infection.

Although this is true, the good has not been unmingled with evil, for it has become almost universal to believe that ophthalmia neonatorum is invariably caused by infection from gonorrhea, which is a mistake and has led to many unjust accusations.

In an article published by Williams and Rosenberg (Knapp's Archives, March, 1916) I find reported in one thousand births 2.2 per cent. of the children suffered from sore eyes. Eight had gonorrheal ophthalmia and fourteen conjunctivitis from some other cause. No such favorable report as that has ever been made before so far as I know. Coming from such a source reliance can be placed on these figures, which prove that the gonococcus is the cause of the disease in only one third of the cases.

It is quite safe to consider as gonorrheal all acute blennorrhea in infants five or six days old where the flow of pus is excessive and the lids greatly swollen. But we must remember that gonorrheal ophthalmia does not always assume a virulent type in children; for it would seem that the baby sometimes inherits from its mother through the placental circulation a certain degree of immunity, so that the discharge may be slight and the swelling of the mucosa and skin of a moderate degree. Then there is little danger of sloughing of the cornea from pressure, but there is danger that the cornea will necrose from direct infection. On the other hand, it is well to remember that the staphylococcus aureus can cause a purulent conjunctivitis which may be difficult to diagnose; and if one is not an expert microscopist in the examination of such discharges, he may mistake this form of staphylococcus for the gonococcus, since they resemble each other in size, shape and grouping and may inhabit the intracellular protoplasm. The gram staining method will differentiate them and cultures determine them.

Although the adult conjunctiva does not react

severely to any strain of staphylococcus, with infants the inflammation can be of a most pronounced type; indeed, more severe than the milder forms of true gonorrhea; but it has this distinction over the latter, namely, it can be easily cured, which may be one of the reasons for the popularity of argyrol and protargol. I have never cured a case of gonorrheal ophthalmia in the infant or the adult inside of three weeks. I am not prepared to discuss urethral gonorrhea, but I do know that so far as the eye is concerned the disease must run its course. This statement I made several years ago, which I can now substantiate by the following quotation from Roemer: "I am convinced that in blennorrhea it is a matter of indifference what known remedy we use in addition to cleansing the eye, the infection takes its legitimate course." Evidently the author refers to gonorrheal ophthalmia, therefore if one cures a pronounced blennorrhea in a few visits he may safely give on opinion as to the cause.

Axenfeld in his work on the bacteriology of the eye says regarding the colon bacillus, "Its prevalence in so many cases of new-born catarrh which is not gonorrheal is in favor of its causal symptoms in other cases. Since this is not a very virulent microbe on a mucous surface it may be one of the causes of the mild forms of blennorrhea we see in the new-born which are so easily cured by simple antiseptics or the zinc salts. Far different is it with the pneumococcus which rarely but sometimes attacks the eye of the infant. It may excite an inflammation of varied degree but rarely a blennorrhea, the discharge being made up chiefly of mucus and tears. If, however, the cornea ulcerates pus will be found in the conjunctival sac because of chemotaxis. Infants of low vitality may lose their eyes from this disease because of ulceration of the cornea, for it is not unusual to find marginal ulcers at an early date even when there is a very slight discharge. Pneumococcus inflammation is not much influenced by antiseptics or silver salts, for if once well established it may be as destructive as Neisser's blennorrhea. Fortunately it is not common and the new remedy, ethyl-cupro-hydrochlorid seems to control it, at least, it is nearer a specific than anything else, and since it can do no harm in any other form of conjunctivitis it is wise to try it in all cases where the ulcers are marginal and the character of the disease suggestive.

I have never seen diphtheria of the conjunctiva in an infant a few days old, nor do I know of a case of acute catarrh from the Koch-Weeks or the Morax-Axenfeld bacillus. Such have been reported, but they must be very rare and cannot be considered venereal. Although I believe that all cases of blennorrhea in the new-born are caused by infection from the vagina or from the dirty fingers of nurses and attendants, yet there are cases where no virulent

\* Read at the 59th Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 8-10, 1916.



microorganisms can be found as in acute trachoma.

From long observation and experience we have become very suspicious of any discharge from the genitals. I am sure there is a disease of the conjunctiva, nongonorrheal in type, which may be called leucorrheal ophthalmia. If we examine the pus from these eyes we may find a remarkable flora of organisms, and again we may find nothing, not even the xerosis bacillus. Now, if such inflammation can attack the eyes of adults from such causes, it is not unreasonable to think that the new-born may suffer also, which may account for the fact that often nothing will be found in the secretions.

In the hunt for the cause of granulated lids, a new disease has been discovered, the einschluss blennorrhea, or in English, inclusion blennorrhea. In the scrapings from the inflamed vagina or urethra, stained by Giemsa's method, there is often found around the nuclei of the epithelial cells masses or zooglae of extremely minute cocci. They are called from the discoverer Prowazek's corpuscles. I have seen these bodies many times when staining with hot methylene blue solutions but thought they were artifacts. Although they have not been cultivated and consequently Koch's law has not been complied with, we have good reason to believe that they are the cause of some forms of mucopurulent catarrh; at any rate, they are found in many cases of ophthalmia neonatorum with or without the gonococcus. Until we know better it is well to consider some of the subacute blennorrheas coming on in the first days of life, running a protracted course and not inclined to attack the cornea, einschluss conjunctivitis. It is characterized by a slight discharge of mucopurulent matter, a certain degree of roughness of the mucosa and lachrymation. These are the cases which look as if the lachrymal duct is occluded. It is not dangerous but annoying. The zinc salts have little or no effect, but a mild solution of the sulphate of zinc mixed with hydrastin seems to hold it under control. The sovereign remedy is the nitrate of silver, 3 to 5 grains to the ounce of water, applied to the inverted lids once a day; the solution being washed off before the lids are replaced. This disease lasts from two to six weeks and leaves the conjunctiva healthy.

It is surprising how often we fail to find in the discharge of acute ophthalmia any organism, staphylococci, streptococci, Koch-Weeks bacilli, and all may disappear in a few hours, even the gonococcus will leave the pus and will only be found in the scrapings from the inflamed mucosa. Therefore, it is presumptive to assume that some forms of blennorrhea in the new-born are of some unknown infection, for however careful one may be in staining or culture nothing more than the xerosis bacillus will be discovered.

These cases do very well when treated with the new silver preparations, which, although they may have no germicidal virtues, are useful to keep mechanically the conjunctival sack clean. Here again the best remedy is the nitrate of silver. Like gonorrheal infection it may run a rather protracted course, but will finally give way to the silver.

One caution must be observed, that is, never to let up on treatment until the eye is cured, for on the slightest neglect it will relapse. I usually start with a 5 grain solution applied twice a day, then once a day, weakening the solution as the eye improves.

If a 1 or 2 per cent. solution of silver is dropped into the conjunctival sack of new-born nine months, healthy baby, very little reaction will follow, that is, in the majority of instances. If on the other hand the same strength of silver is used on a premature seven months child the reaction may be so severe that unless one is cautioned he may mistake it for gonorrheal ophthalmia. The swelling of the lids may be very great but there will be no discharge of pus. The edema of the lids and conjunctiva will be at its greatest twelve hours after the application, which is twenty-four hours too soon for true ophthalmia neonatorum. The condition may be very alarming, but thanks to the soothing effects of protargol and the like, soon improves. Should, however, the doctor mistake it for the true thing and attack the lids vigorously with silver, the Lord knows what will happen. I have seen several such accidents when I have been of great service in assuaging the alarm of the attendant and the distress of the parents.

626 Bryant Building.

#### PRIMARY ACUTE GLAUCOMA\*

HAROLD BAILEY, M.D.  
SPRINGFIELD, MO.

The subject of glaucoma is so broad that I have attempted so far as is possible to limit this paper to a consideration of what is commonly understood as acute glaucoma or acute inflammatory glaucoma as distinguished from chronic glaucoma or glaucoma simplex. The two diseases are essentially different in some respects and very much alike in others so that a consideration of the one must necessarily have a certain application to the other.

Priestly Smith has defined glaucoma as being an increase in the intraocular tension plus its cause and effect. Not a very clear definition but quite in keeping with our knowledge of the subject, for we know very little about glaucoma.

\* Read at the 59th Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 8-10, 1916.

It is remarkable that so common an affection, representing as it does about 1 per cent. of all eye diseases, should have baffled the investigations of both oculists and pathologists for more than half a century. We still remain in ignorance of the cause, and our present knowledge of its pathology does not permit of our discriminating between what is cause and what is effect. Picture, if you can, a patient with an acute glaucoma walking into one of our large eye clinics and submitting to the same operation that von Graefe performed on his great grandfather back in 1856 and you will have a very fair idea of what is meant by a half century of progress in the treatment of glaucoma.

If an increase in tension is the *sine qua non* of glaucoma, it will not be out of place to consider first the tension as it exists in the normal eye. Measured by the tonometer, it represents 20 mm. of mercury as accepted by the more exact, or from 12 to 27 mm. as given by those admitting a physiologic variation. Just how this normal tension is maintained is a question which has received many different answers. It is evident that nature has taken some precautions to preserve a normal tension, otherwise the disease would be far more common than it is. That these efforts have been crowned with a fair measure of success is shown by the fact that glaucoma is essentially a disease of advancing years. It is rare before forty. Less than half as many cases occur between forty and fifty as occur between sixty and seventy. It is safe to say that the tension depends on the amount of fluid entering the eyeball and on the amount leaving it within a fixed time, the rate and volume of the inflow and the outflow. It is possible that one of the weak spots in nature's plans and specifications occurred when she built the eye without any true lymphatic vessels. She placed a few in the conjunctiva but none in the eyeball proper. True, she planned lymph spaces around some of the blood vessels entering the eyeball and possibly she did not make sufficient allowance for the hardening and thickening of these vessels with advancing years. She also provided some intercellular spaces for lymph and a few larger receptacles consisting of the canal of Cloquet in the vitreous; the perichoroidal space and the anterior and posterior chambers; the spaces in the suspensory ligament and the vaginal spaces of the optic nerve. Tenon's capsule is probably a lymph space although this has been disputed. Of these the anterior lymph spaces, consisting of the anterior and posterior chambers, are of far more importance than the others since most of the lymph leaves the eye from these reservoirs. The lymph flows from the posterior chamber through the pupil into the anterior chamber and thence through the ligamentum pectinatum into Schlemm's canal from which it is carried off through the anterior ciliary veins. A very small portion of aqueous

undoubtedly leaves the anterior chamber through the anterior surface of the iris and through the anterior portion of the ciliary body, but the amount is undoubtedly extremely small.

The origin of the aqueous is from the blood through the medium of the vessels in the ciliary processes. The process is not a true secretion, but one of filtration or transudation. Its rate of formation is therefore dependent on the blood pressure in the vessels of the ciliary processes on the one hand and on the intravascular pressure on the other. From this it is evident that the volume of aqueous produced at a fixed intraocular pressure corresponds to the amount absorbed. This being true, then the rate of absorption depends on and is determined by the degree of intraocular pressure. Now since the intraocular pressure varies directly as the blood pressure in the vessels of the eye, then the rate of aqueous absorption must necessarily be determined by this blood pressure; so that the formation of the aqueous is in direct proportion to and dependent on the intraocular blood pressure. The lymph derived from the choroid and ciliary body is slight in amount, is carried out via the perichoroidal space through the perivascular sheaths of the vortex veins and has nothing to do with regulating the intraocular tension. Since Schlemm's canal and the anterior ciliary veins form the gateway of exit for the greater part of the intraocular fluid then this portion of the eye and the structures immediately adjacent constitute the danger zone when considered from the standpoint of glaucoma. What function the sclerocorneal coat has to do with regulating intraocular pressure is problematic. Its elasticity may play a part. It would seem as though the physiology of the normal tension were best explained by the direct relation between the blood pressure in the small vessels of the ciliary processes and the counter pressure of the aqueous humor. That the blood pressure and rapidity of filtration is directly influenced by the aqueous counter pressure is easily demonstrated. There seems slight room for doubt but that this pressure is still further controlled by the sympathetic nervous system. Nature has assuredly furnished the eye with a wide margin of security for the proper regulation and preservation of so important a function as a normal intraocular tension. We know that this margin is nearly always ample up to middle life and that it becomes less and less effective with the advancing years that follow. When her plans go wrong in one eye they almost invariably, sooner or later, go wrong in the other. Glaucoma nearly always attacks both eyes.

The theory advanced that glaucoma is due to a general venous stasis is hardly tenable. Experiments have shown it is true that by tying all venous outlets it is possible to burst an eyeball; but nothing approaching such a condition ever obtains in actual life. An obstruction of the



venae vorticosae sometimes occurs in bad cases of acute glaucoma. This is undoubtedly a secondary condition resulting from the increased tension. In cases where a general venous stasis exists the tension of the eye is not increased.

The association of glaucoma with changes that take place in the eye with advancing years is pertinent to the fact that the sclera becomes more dense and less elastic with age and its density appears greater in glaucomatous than in normal eyes. This increased density causes a reduction in the size of the openings through which pass the venae vorticosae, a point held by some close observers to be an important one in the etiology of glaucoma. We know that the small hypermetropic eye is more frequently attacked by glaucoma than the larger myopic one; that whereas the average horizontal diameter of the normal cornea is 11.6 mm., an eye with a corneal diameter of 10 mm. or less is extremely liable to glaucoma. The bearing which the size of the eye has on the liability to the disease is obviously due to the relative relation of the lens to the structures adjacent and more especially the ciliary processes. The transverse diameter of the adult lens averages about 9 mm. and the distance from the edge of the lens to the ciliary processes is only 1 mm. This is a very narrow margin when we consider that both the ciliary processes and the lens increase in size with advancing years. Priestly Smith has shown that between the ages of 25 and 65 the lens adds one tenth to its diameter and one third to its volume. In the hyperopic eye we have added to this the thickening and enlargement of the ciliary body from excessive contraction of the ciliary muscle. With this encroachment on the perilental space the passage of fluid from the vitreous through the suspensory ligament may be interrupted. Should this occur the swollen and enlarged vitreous would press against the lens forcing that body forward against the already swollen ciliary processes and the iris and thereby encroaching on our danger zone. We have a clinical demonstration of this in those cases of secondary glaucoma which are brought on by a hemorrhage into the vitreous, and also in those cases resulting from an encroachment on the vitreous space from intraocular growth. The effect in these instances is not due to an enlargement of the lens but to a forward displacement of the lens with the same result.

A theory for the cause of glaucoma which has received no small amount of consideration is that brought forward by Henderson. He believes the primary cause is due to a sclerosis of the ligamentum pectinatum; that the fibers which enter into its formation become thickened and so interfere with the filtration through the meshes of the ligament into Schlemm's canal. This, says Henderson, leaves the crypts of the iris the only means of exit for the lymph. Such a condition when associated with intravenous

pressure will cause glaucoma. To substantiate this theory it would seem necessary to examine a large number of eyes in the very early stages of glaucoma with a view to demonstrate this sclerosis, and as a primary condition, not secondary to the plus tension. Thus far the reports made of eyes examined in the early stages of glaucoma showed no sclerosis of the ligamentum pectinatum.

An attempt to attribute the phenomena of glaucoma to chemical changes taking place in the tissues of the eye, as exploited by Fischer, has excited much interest. Reasoning from the standpoint that living tissue consists largely of colloids, this physiologist then proved by experiments that the amount of water absorbed and secreted by the tissues depends on the state of these colloids. That colloids in an acid medium absorb and retain more water than in a neutral medium. That an eye immersed in distilled water would change very little if any in weight, but the same eye placed in a weak solution of hydrochloric acid would swell until it burst. That this was true to a less extent he believed in the acid conditions of the blood in life as present in rheumatism and other disorders. That this increased acidosis resulted in the absorption of an excess of water by the tissues of the eye. That the vitreous, sclera and choroid loaded up with more water than did the aqueous and cornea with the result that the lens was forced forward and glaucoma produced after the manner I have previously stated. The theory seems more plausible as applied to acute glaucoma, the subjects of which are frequently examples of a uric acid diathesis, than to chronic glaucoma in which there is often an entire absence of any such constitutional dyscrasia. Also in the chronic form where an opportunity is given for months of treatment with a view of relieving the systemic condition the glaucoma persists and often grows worse. Furthermore, where these conditions of acidosis exist there are frequently present changes in the tissues of the eye and other parts of the body which might explain the cause of a glaucoma in another way. Of late years we have learned to attach much importance to arteriosclerosis and high blood pressure in the etiology of disease. An angiosclerosis of the blood vessels of the ciliary processes with an accompanying elevation of the blood pressure could easily result in the secretion of an aqueous abnormally rich in albumin. We know that the ciliary processes produce the aqueous in a manner similar to the excretion of urine. The blood flows directly from the arteries into the veins without passing through the medium of intervening capillaries. Such an aqueous laden with albumin might experience much difficulty in finding its way through the ligamentum pectinatum into Schlemm's canal, and the filter could soon become blocked with glaucoma resulting. This would of course be favored by the swollen

ciliary processes obstructing the circumferential space causing an accumulation of fluid posterior to the lens. The lens is thus crowded forward against the iris root, twice as thick in old people as in infants; and the root of the iris is compressed between the ciliary body and the ligamentum pectinatum, to which latter structure it becomes adherent; weakly adherent in acute glaucoma and readily torn loose by iridectomy, strongly adherent in chronic glaucoma and iridectomy often a failure. Granting the importance that Schlemm's canal plays in glaucoma, and this is emphasized by its absence in congenital glaucoma, the interference with the outflow at this point does not appear to be the primary condition, but secondary to the changes occurring in the vessels of the ciliary processes. Unquestionably these changes occur in a great many eyes without bringing on an attack of glaucoma. They are more likely to result in glaucoma in eyes having certain anatomic characteristics as are found for example in the small eyes of the hyperope, and in eyes having relatively large lenses as we find in people advanced in years. These conditions are contributory causes but not the primary cause. Bearing in mind the fact that the ciliary processes are by far the most vascular of all tissues of the eyeball, and recognizing the important part they play in the early pathology of glaucoma, it is only natural that we should look to the circulatory system for the primary intraocular changes of the disease. Arteriosclerosis and a high blood pressure occur to a greater extent in people who have glaucoma than in those who do not. It is evident that so delicate a tension balance as exists in the eye under normal conditions and depending on the relation of the inflow to the outflow, is not unlikely to become deranged. The normal tension is not purely a question of physics. The entire vascular mechanism is under the control of the nervous system. Intraocular pressure is regulated by the sympathetic nerve, irritation of the cervical sympathetic increases the tension whereas section of the nerve reduces it.

Given an eye small in size containing a large and hardened lens in a person with arteriosclerosis and high blood pressure and possibly an increased acidosis, and we can readily imagine that it would require but a very small straw to break the camel's back. The moment the tension balance is ever so slightly deranged the congestion and edema become accentuated by their own presence. Congestion causes more congestion and edema still more edema. This last straw may be found in over-use of the eyes with resulting uveal congestion, excitement, worry, lack of sleep, etc. Jackson reports a patient that was forced to give up card parties owing to prodromal symptoms of acute glaucoma which she frequently noticed following these functions. In the case of Javal one eye was lost from an attack which commenced at the close of an electoral campaign, and the

other following the Dreyfus case in which Javal took a great personal interest. Statistics show the disease more common in the thin than in the fat; in the Hebrew than in the Gentile; in eyes that are dark than in those that are blue or gray. We know that brunettes are more excitable and emotional than blondes, and the Jewish race noticeably so. People that are extremely nervous are usually thin.

The treatment of acute glaucoma may be medical or surgical or a combination of the two. The medicinal treatment follows the indications for an osmosis, both general and local; for lowering the general blood pressure; for massage and electricity; and for bringing about a contraction of the pupil. The internal administration of salt commencing with 45 grains daily and increasing up to 15 gm. was used by Cantonnet with good results. The salt in solution may also be injected into the colon. Subconjunctival injections of sodium citrate, 5 to 15 minims of a 4 to 5 per cent. solution, is a favorite method with some. Dionin certainly has a good effect in acute glaucoma although there has been some opposition to its use. A combination of dionin with holocain has a better effect than dionin alone. Adrenalin is a pupil dilator; although given credit for good results in acute glaucoma, I rather doubt its value. Blood pressure should be determined in acute glaucoma as it is frequently elevated and may serve as an exciting cause. However, a certain amount of elevation of the blood pressure may be commensurate with the health of the patient, and compensatory for fibroid changes in the peripheral vessels. High frequency currents and massage, either simple, vibratory or suction massage, will reduce tension sometimes. Of the drugs which relieve glaucoma by bringing about a contraction of the pupil eserine and pilocarpin are easily the favorites. Their good effects are probably due to the drawing of the base of the iris away from the filtration angle and cornea, and also to the opening up of the crypts in the iris by putting that structure on a tension. Their use is especially to be commended in the prodromal stage of acute glaucoma in cases declining operation. They should be used constantly to be effective and may ward off an attack of acute glaucoma for years. Where the acute attack is already present in force miotics are in no sense to be considered as a substitute for operation. However, in an acute attack where the cornea is so steamy that the iris is obscured and the anterior chamber extremely shallow, making operation difficult and dangerous, miotics may be used to pave the way for a more successful operation, which should not be unduly delayed. Their prompt use by the family physician in the interim following his diagnosis and pending the time when the patient can be placed in care of a specialist will preserve sight that would otherwise be lost. The miotic effect of both eserine and pilocarpin is



increased when these drugs are given in conjunction with a weak solution of cocain.

Let it be here distinctly understood that in mentioning the use of drugs in the treatment of acute glaucoma, the writer is not in any sense sanctioning their employment by the family physician as a substitute for surgical intervention. If there is any one disease in the long list that go to make up the science of ophthalmology that the general practitioner should know how to diagnose, it is acute glaucoma. The saddest cases that we see are these sightless people that are led into our office bringing with them that all too familiar history of neuralgia for which they have been treated by their family doctor. This term neuralgia is not so much "The cry of a nerve for blood," as is sometimes defined as it is the cry of the doctor for a diagnosis.

The treatment of acute glaucoma is essentially surgical. Medicinal treatment is more or less effective, but the risk in delay is too great to be contemplated with equanimity. I do not mean by this that the surgeon should perform an immediate operation as soon as a case of acute glaucoma presents itself. In some of these cases the transparency of the cornea is so impaired and the anterior chamber so shallow that an iridectomy is an extremely difficult operation. So difficult that it is often justifiable to resort to other methods first, and follow with iridectomy as soon as the improvement reaches a stage permitting of the operation being performed with a fair prospect of success. Whatever the course decided on it will require good judgment lest a bad matter become still worse. This is especially true where miotics are relied on, as their effect in some cases is disappointing. Where the effect is not fairly prompt operation should be performed at once. It has been my own practice to do an iridectomy immediately the case presents itself unless the condition of the cornea and shallowness of the anterior chamber would render the operation almost a blind procedure. It is astonishing how badly an iridectomy can be performed and yet give a good result in acute glaucoma. If necessary a second iridectomy can be done later, and preferably along side of the former iridectomy, thus permitting of the root of the iris being torn away across the entire length of the combined coloboma. In the few cases in which an iridectomy appears too hazardous I prefer to do a posterior sclerotomy rather than rely on miotics. This will usually admit of an iridectomy in twenty-four or forty-eight hours under greatly improved conditions. The manner in which iridectomy relieves glaucoma is still open to question. It is probable that iridectomy reduces the tension in more ways than one. In the first place it opens up the angle of filtration so that the aqueous has renewed access to Schlemm's canal. It also leaves a fresh and raw surface of the iris at the edges of the iridectomy which,

according to Henderson, never heals up to a point that prevents the absorption of aqueous from the cut surface. Another possible and to me extremely probable way depends on the manner of healing of the scleral wound. We sometimes see a cystoid cicatrix following iridectomy for glaucoma, a permeable scar through which filters the aqueous from the anterior chamber out under the ocular conjunctiva. It is not difficult to believe that such a filtration may be present yet not be visible to the naked eye. Still another possibility is the part played by the formation of new bloodvessels around the seat of the operation wound. In which of these ways, if any, iridectomy stops the process of acute glaucoma we do not know, but we do know that it does it quite effectually in the great majority of cases. Since its first performance by von Graefe in 1856 a large number of operations have been advocated for the relief of glaucoma. Leaving out those which have not come into general favor and passing over the older and established operations, the value of which is generally recognized, we have left two excellent operations, both of which have been thoroughly tried and have proven of unquestioned value. These are the iridosclerotomy of Lagrange and the corneoscleral trephine operation of Elliot. Both have as their object the creation of a permanent filtration fistula between the anterior chamber and the subconjunctival space. Each operation recognizes the importance of securing a large conjunctival flap to protect the fistula against later infection.

In the Lagrange operation the section is made after the manner of an iridectomy but just before completing the section the knife is turned backward to include a section of sclera attached to the upper margin of the cornea. A small piece of this sclera is then excised with small scissors, after first turning forward the conjunctival flap. Iridectomy is then performed and the flap replaced. The operation may be performed without iridectomy but there is an added danger that part of the iris will bulge into the wound. Lagrange himself does not advocate the operation for acute glaucoma but others have adopted it for both acute and chronic cases. The results in general have been good. The complications most to be dreaded are hemorrhage, loss of vitreous, iridocyclitis, cloudiness of the lens and posterior synechia.

The trephine operation of Major Elliot as described by him and performed on over one thousand patients also has as its object the establishment of a filtration fistula, but the anterior chamber is opened by removing a small button of corneoscleral tissue with a trephine. It is nearly seven years since Elliot performed his first trephine operation. In his early cases he did a simple trephining without iridectomy. He has since adopted iridectomy as a routine procedure. He found that in the absence of an



iridectomy the iris was prone to prolapse into the trephine opening and interfere with filtration. To further prevent this he changed the location of the opening and placed it farther forward, splitting the cornea before inserting the trephine. He considers the operation applicable to all forms of glaucoma except those cases secondary to cataract with fluidity of the lens, in which the lens bulges into and blocks the trephine opening, and in traumatic conditions where there is free communication between aqueous and vitreous.

Major Elliot paid a visit to the United States about three years ago and demonstrated his operation in several of our large cities. He was tendered an enthusiastic reception and his operation was received with great favor. Many of our leading specialists placed themselves on record as believing that the days of iridectomy in glaucoma, both acute and chronic, were numbered. In defense of the von Graefe operation it is only fair to say that an operation that has given us the brilliant results that this one has for sixty years should not be lightly discarded in favor of one that was first performed in 1909. There are still some of us left who consider iridectomy the operation of choice in acute glaucoma and it seems hardly fair to discard one operation for another that has embodied in it the original operation. It is not altogether clear that part of the good results following the trephine operation are not attributable to the iridectomy accompanying it. The same can be said of the Lagrange operation. There are some objections to the Elliot operation. Among these are danger of late infection through the established fistula, iritis, not an infrequent occurrence, and opacity of the lens coming on following the operation. The operation is probably more easily performed than iridectomy, but in acute cases great care is necessary to avoid injury to the lens.

414 Woodruff Building.

---

#### EXPERIMENTAL MEASUREMENT OF THE BONES OF THE FOOT AS AN AID TO A BETTER DIAGNOSIS AND MORE RATIONAL TREATMENT

B. BELOVE, M.D.  
KANSAS CITY, MO.

As this is experimental work with no authority back of it, errors are more or less excusable, and perhaps to be expected. We do not want to be understood to claim that a diagnosis of a given case of foot complaint can be arrived at by measuring only the bones of the foot to the exclusion of all other methods, such as the plaster impression, physical examination, etc. It is rather to be regarded as an adjuvant to the other well-known orthopedic methods of diagnosis. In this study, which covers a period of

from three to four years, the orthopedic material of the Kansas City General Hospital as well as private cases was used. I am indebted to Drs. L. A. Marty and C. O. Donaldson for their invaluable aid with the Roentgen ray.

The method used in the early part of this investigation was as follows: The negative made with the foot at rest was taken with the patient lying on the side and the inside of the foot placed next to the plate, taking care that the rays passed straight through the foot from side to side and also having the foot lie as near to the right angle with the leg as possible. The plate made with the foot bearing the body weight was taken with the patient standing, and the plate as before placed against the inside of the foot, the rays passing straight through the foot from side to side, the foot being at right angles with the leg. At present the method was modified and the first position (at rest) is also taken on standing, but only touching the floor without the superimposed weight of the body.

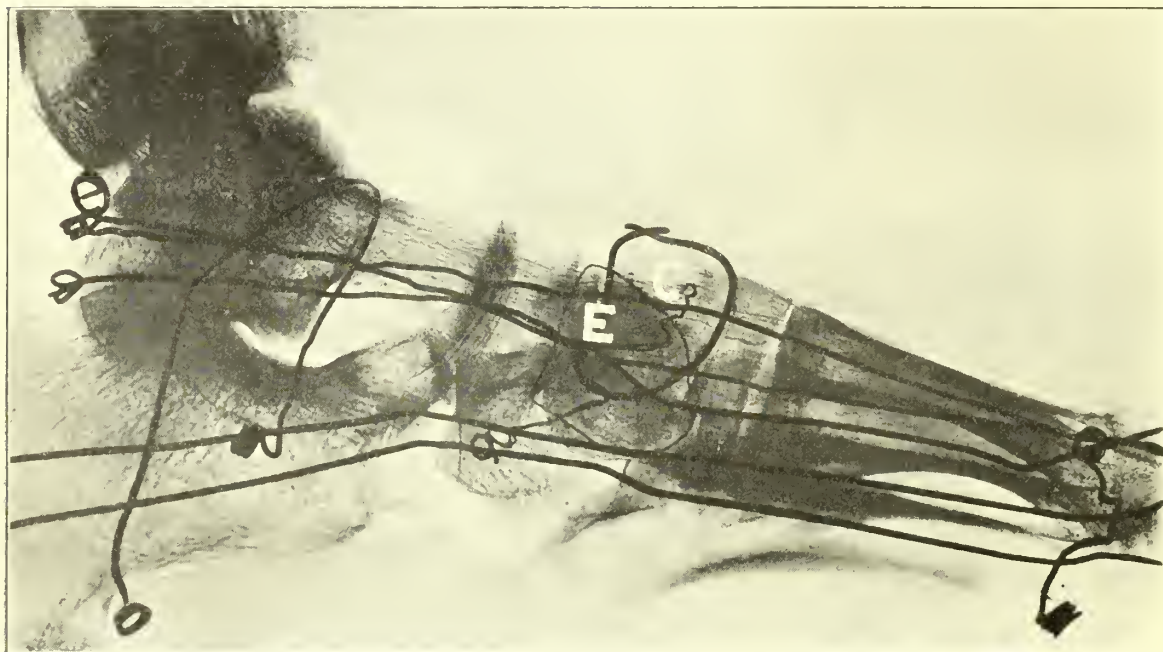
It is not easy to draw a line between the normal and the beginning of a pathologic foot with no symptoms to guide us. I am not able to determine with certainty from these measurements where the normal ends and the pathologic begins, for as these measurements were not described before, no standard has been established. But once establishing the fact that "there is something the matter with a given foot," these measurements throw some light on the pathology and especially give us relative information. For example, if we notice that the cuboid sags out in the standing position as shown in the Roentgen ray of one of my cases, left cuboid, 14 mm., right cuboid, 2 mm., the conclusion would be that the left cuboid is in a worse plight and should be dealt with accordingly. In light cases there is simply an altered relative position, a mechanical pathology, so to speak. As the disability progresses, there is real pathology in the shortening or lengthening of muscles, hypertrophy and atrophy of bones, etc. This is what may happen, with many variations, to the bones of the foot on standing: The tibia and astragalus may rotate inward; the scaphoid, the proximal end of the first and fifth metatarsal, downward and inward; the front of the os calcis may follow the astragalus; the cuboid may be elevated or depressed; there may be a twisting of the whole limb, which rotates at the hip joint, the sacroiliac joint and even the occiput; the inner malleolus may be seen to move downward, inward and backward; the external cuneiform may go up or down or unchanged (as shown on the Roentgen-ray plates); the internal cuneiform and middle cuneiform may go down. Similar mechanical movements probably take place in the rest of the skeletal foot bones, but they were not studied.

Up to a certain limit these movements occur in relatively normal feet, as stated before. As

the mechanical pathology is left unchecked, various changes take place. If the bones are viewed with the Roentgen ray in a hallus valgus we may find the line between the metatarsal and cuneiform is oblique instead of horizontal; we may note an os intermetatarsum between the first and second metatarsals and which is grown sometimes with the cuneiform bones. According to Boniface, the first metatarsal is dislocated on account of wedging in of the sesamoid bones between the first and second metatarsals. Through the action of the foot flexor muscles and contraction of plantar ligaments and fascia, the scaphoid and internal cuneiform are sometimes raised too high and a pathologic condition results (case A. A. G.). On physical examinations there are symptoms of inflammation in the joint, swelling, pain, etc. (also a good example

of the bones and joint structures. When the joint is pushed down the same thing happens in the lower portion of the joint. Therefore, overcorrection as well as undercorrection is to be avoided. One can note this in a pes cavus (M. J. case).

The object of this investigation is an effort to determine more exactly the mechanical pathology in a given case. Heretofore no mention is found in the orthopedic literature of measuring the individual bones of the foot-skeleton as to their tendency to subluxation or state of actual dislocation. I do not flatter myself as having discovered the key to the mechanical pathology of the foot-skeleton; that has been studied, especially on the cadaver and otherwise. As it is rather impossible to make a post-mortem on each patient, and as the methods of



Illustrating how the experimental work on recognizing the shadows of the external and middle cuneiforms was carried out. In other x-rays the external and middle cuneiforms were taken out. Change in shadows noticed.

represents the J. case, the A. A. G. case; the head of the first metatarsal was pushed up too high with ready-made plates with resulting pathology). This illustrates the point that bones are to be approximated but not overcorrected. When you have a dislocation, not overcorrection but correction is the aim.

Bones composing a joint are to be approximated at 180 degrees, the long axis forming a straight line. Any deviation from this may be viewed as pathologic. Therefore the treatment of the foot bones should be with the object of approximating and not separating them. When you overcorrect, or, more explicitly, when you push up a joint, an interval is formed on the upper part of the joint with resulting changes

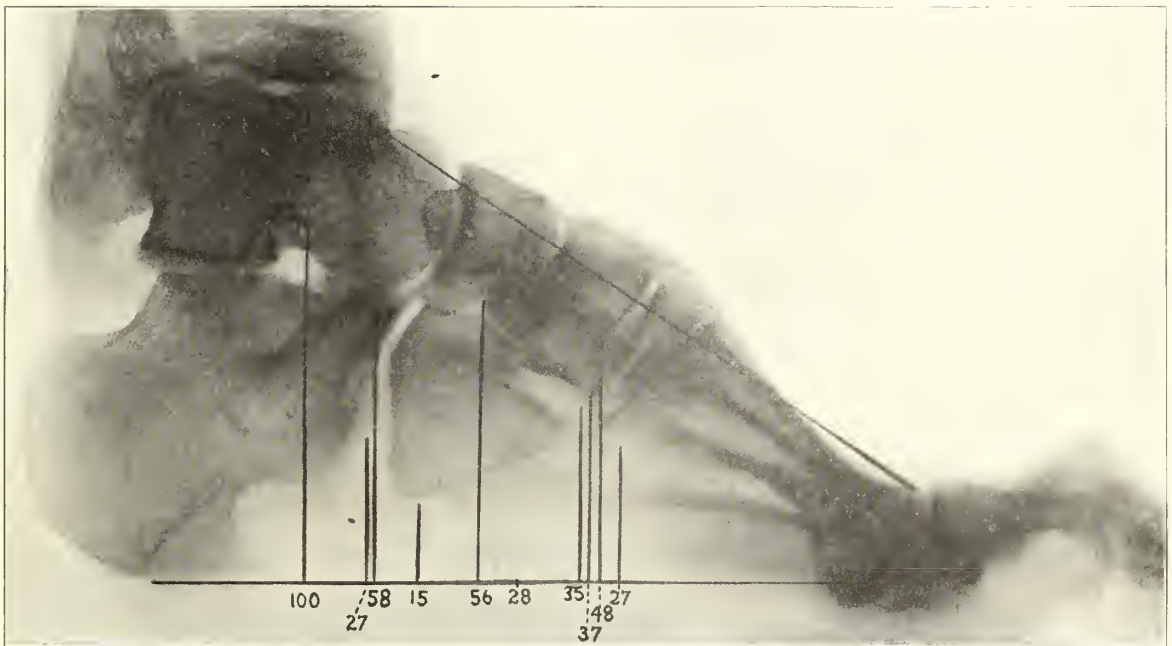
diagnosis given sometimes convey only a general idea of the condition of the foot and far from satisfactory in a living individual, I set out on this perilous journey of measuring all possible bones of the foot-skeleton. But how are they to be measured? When the foot is at rest the mechanical pathology of the foot is at its minimum. On the other hand, on standing the mechanical pathology is at its maximum, even bones with slight tendency to separation or subluxation being acted on by the superimposed weight will sag down. Therefore, it was thought best to measure the bones at rest and on standing, so a line was drawn on the Roentgen-ray plate between the main bearing weight bones of the foot-skeleton, the undersurface of the os calcis



and the lower surface of the head of the metatarsal. Then perpendicular lines between the respective bones of the foot and the former "under surface line" are drawn. The most likely movable parts of the respective bones are selected, and that method has been slightly modified since. Care is being taken that the comparative measurements are taken from the same points. The difference in the measurement is of course not difficult to figure out. In some cases all the tarsal bones were measured; in others the external and middle cuneiform were excepted on account of the difficulty to recognize them on the Roentgen-ray plate and also for embryologic reasons, as I shall endeavor to explain later. The base of the first metatarsal is also measured and sometimes the fifth metatarsal as well.

cation or subluxation. In other cases it simply means a change of position as a whole.

We do not know how much importance is to be attached to these measurements. Personally, I feel since adopting this method, and of course not excluding the physical examination with cast impressions, that a better idea is conveyed to me about a given foot than before. For example, in one case the cuboid bone on the left foot shows a difference in measurements of 14 mm., the right foot only 2 mm. In another case the cuboid measurements instead of going down, go up. In S.—S. case the cuboid goes up 2 mm. on weight bearing. Such facts are easily overlooked without measurements and the recognition of these facts means a different treatment. Surely the cuboid which has a tendency to go down 14 mm. is to be elevated,



Case of M. J.

In order to interpret these measurements, it is essential to be thoroughly familiar with the anatomy of the foot. One should be able to put his fingers on the cast and single out the different bones that need raising or lowering. In some cases, especially those of long standing, the measurements are rather low, and it simply means that the lowering was going on for so long that the bones had set and not capable of going up in the rest position, as they do in more recent cases. The comparative measurement may show that further lowering is still going on. It is then important to note both the comparative measurement and the general measurement—that is, the height of the foot bones from the "under surface line" below. In some cases the measurements represent actual dislo-

while the cuboid going up 2 mm. is probably best left alone or perhaps have it depressed. From this investigation, as insignificant as it may be, we may draw the conclusion that to designate a case of flatfoot—that is to say, that the long arch is involved or the anterior arch is involved—is misleading and unscientific in many cases. In some of these cases the scaphoid and internal cuneiform go down the same distance (example J.—Y. case). In others the internal cuneiform does not necessarily sag down with the scaphoid (example, S.—S. case, right foot: scaphoid goes down 8 mm.; internal cuneiform goes down 7 mm.).

This variation in mechanical pathology emphasizes the importance of not treating the various conditions of the foot in a routine way,

but rather that each bone, irrespective of its insignificant size, should receive most careful attention.

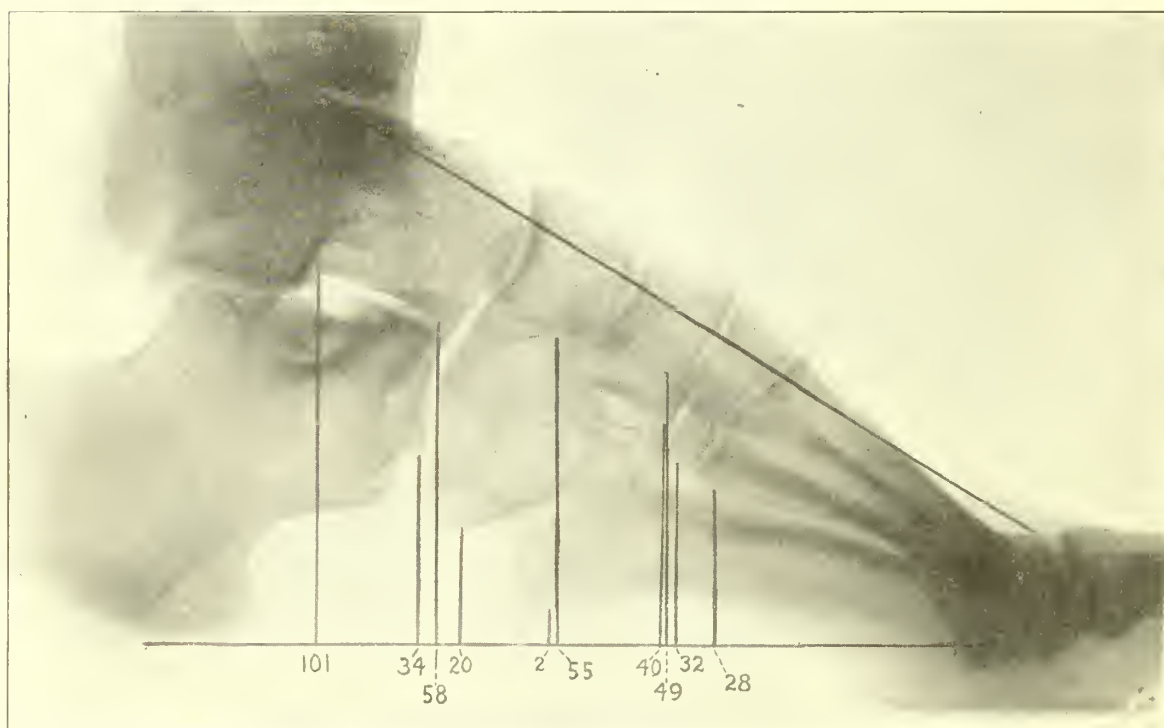
In the J.—Y. case in the right foot on standing the cuboid goes up 4 mm., the left foot 3 mm. The external and middle cuneiform measurements are particularly interesting: right foot, the external cuneiform going up 1 mm.; middle cuneiform going down 2 mm. Left foot, external cuneiform unchanged; middle cuneiform 2 mm. down.

According to the *Handbuch für Orthopädische Chirurgie*, these two bones are not involved in pathologic changes. In these measurements in two cases it would seem that the bones do play some rôle in the mechanical pathology,

by the Roentgen ray; not so with the middle and external.

It may be stated that these are probably distinguished only for several years, later the shadows overlap and they are not distinguished by the Roentgen ray. Of late we were able, with the aid of an ordinary enlarging glass, to recognize more clearly the outlines of these bones. This difficulty of being recognized may explain the fact that they were neglected in being studied.

These measurements should lead us to a better understanding and a clearer diagnosis should lead us to a better treatment of the cases. I have tried this in several of my cases, and while I am not able to state from the limited number of cases and the short time elapsed whether the



Another view of M. J.

and as mechanical pathology is transformed in the course of time into real pathology as atrophic or hypertrophic changes, we therefore may infer that these bones should be considered in the pathology and treatment. One reason perhaps for ignoring these bones is simply that it is hard to recognize their involvement. The Roentgen ray is not satisfactory in showing these bones except at a certain age. Example: J—y, 4 years old, right foot on standing, external cuneiform rises 1 mm.; left foot unchanged. The external cuneiform is the first of the three cuneiform bones to ossify (first year), the internal is the next (third year) and the middle one is the last, its ossification occurring in the fourth year. The internal cuneiform can be seen throughout life

results are better or not, yet it gives me more assurance and confidence that we are treading on safer ground.

There is a tendency among the members of the medical profession, not to speak of the laity, to treat the various conditions of the feet with contempt. Doctors think nothing of advising their patients to get ready-made plates. That is just what old Æsculapius used to do with eye trouble. We have reached a stage that such a thing is impossible. We never heard a physician recommend ready-made glasses at the present time. The foot problem is to be solved in the same manner, and the progressive physician, when once finding out the truth, will not shirk his duty and ready-made plates will be a thing of the past.

CASE 1.—Mr. E. N., aged 26, married, express packer; on his feet nine hours a day. Eight years ago contracted gonorrhea. About three weeks after, his feet became swollen and he was confined to bed two months and then went to springs by advice of his physician, and had hot mud baths for two weeks; the swelling disappeared and he walked well. He went back to work as express packer on a concrete floor. At first he noticed a tired feeling, lasting for about a year; next, pain and stiffness, the symptoms being worse in the winter—patient's own expression: "pretty near killing me." For over a year he was unable to do any work on account of this condition of his feet.

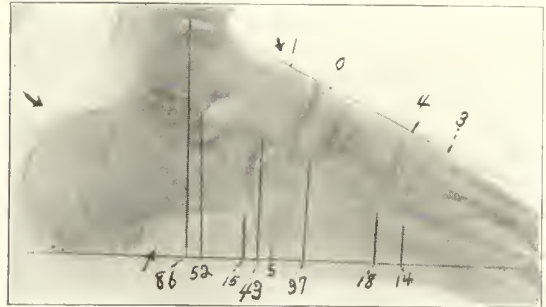
At rest, there is hardly any pain or tired feeling; walking, there is pain and tired feeling; standing, the symptoms are still more exaggerated; lifting weights, the symptoms are most intense. (Important evidence of mechanical derangement.)

*Physical Examination.*—Right foot: varicose veins; corns on three lesser toes, second phalangeal joint; tendency to hammer toe; pain on pressure over scaphoid, os calcis (a great deal) and a little in the astragalus; plantar flexion limited in phalangeal joints. Left foot: The same except there is also pain in the outer side of cuboid; there is marked contract of second, third and fourth lesser toes of second phalangeal joints.

*Mechanical Measurements:* The Roentgen ray negative was taken as described above, one with superimposed weight and one without it and the difference subtracted.

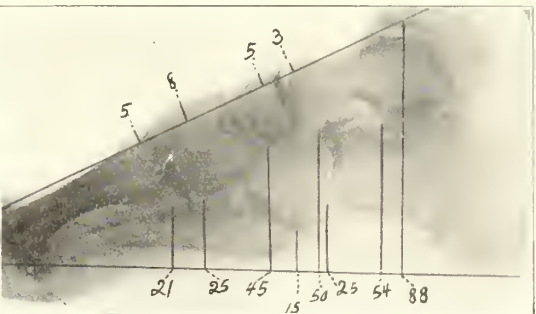
*Diagnosis.*—While the deduction may be called speculative yet with a little thinking one can come to some conclusion; as far as the history and symptoms, we are dealing with a case of gonorrheal arthritis, which in turn caused a general relaxation of the structures of the feet; the weight of the body is sufficient to sag down, subluxate or dislocate the bones of the foot in various degrees; the fact that the patient has little or no pain when at rest, indicates that the arthritis is perhaps quiescent and that the predominating pathology is the mechanical.

The Left Foot.—The general measurements higher and the comparative figures greater; on the whole there is more mechanical derangement than in the right foot which fact would be overlooked without measurement, the cuboid is rather a striking example.

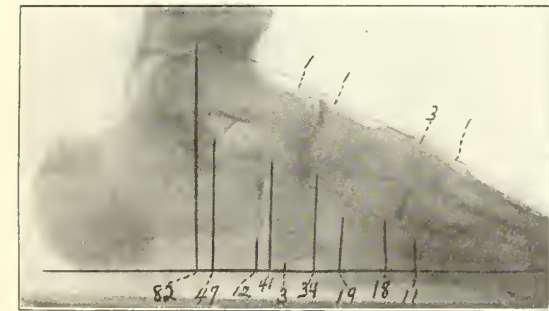


Case of E. N.—Arrows indicate exostosis.

The treatment to be guided by the physical findings as well as the mechanical, the cuboid of the right foot requiring less attention than of the left foot. Each bone to be pushed up (or in some cases pushed down) in proportion to the mechanical involvement by manipulation and with padding and adhesive; the symptoms having subsided and the mechanical derangement more or less corrected, the positive cast (taken before the treatment had begun) is cut out to correct theoretically at least the mechanical involvement; next a drawing is made on the cast and a trained mechanic is ordered to make appliances that would fit the corrections indicated.



Case of E. N.—Left foot at rest. Cuboid measurement 15 mm.



Case of E. N.

#### RIGHT FOOT

	Without Superimposed Weight (Abbreviated, R. F. Z.)	With Superimposed Weight (Abbreviated, R. F. W.)	Difference mm.
	mm.	mm.	
Os Calcis .....	15	12	3
Tibia .....	86	82	4
Astragalus .....	43	41	2
Scaphoid .....	37	34	3
Internal cuneiform .....	18	18	0
Base 1th metatarsal .....	14	11	3
Cuboid .....	5	3	2

#### LEFT FOOT

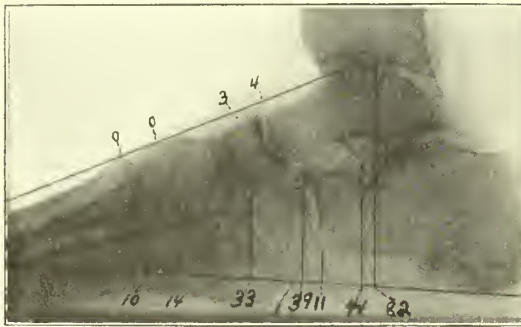
	Without Superimposed Weight (Abbreviated, L. F. Z.)	With Superimposed Weight (Abbreviated, L. F. W.)	Difference mm.
	mm.	mm.	
Os Calcis .....	25	11	14
Tibia .....	88	82	6
Astragalus .....	50	39	11
Scaphoid .....	45	33	12
Internal cuneiform .....	25	14	11
Base 1th metatarsal .....	21	10	11
Cuboid .....	15	1	14



breath, feet and legs dropsical and varicose condition. Duration of his feet condition, forty-five years.

Right Foot.—Pain in foot, leg, and inner side of thigh, tired feeling, itching, numbness; these symptoms are the same at rest and activity. Left foot: symptoms the same.

*Physical Examination.*—Marked deformities of all toes of both feet; hallux valgus more marked in left than right; swelling and puffiness in foot and ankle more marked in the right; pain in metatarso-phalangeal joint of the left foot very severe; a great deal of thickening and corns in both feet; stands with pronation of both feet; the color of both feet is blue and local temperature is increased; anterior arches of both feet markedly down. Roentgen-ray examination shows inflammatory changes, exostoses, extensive hypertrophy and also atrophy. The first metatarso-phalangeal line of the right foot is 81 degrees, of the left is still more abnormal—75 degrees; while both feet have a hallux valgus, in the left foot there is a real subluxation; subluxations are also present in a number of phalangeal joints especially of the left foot, the semoid bone is dislocated which according to Boniface is the cause of the subluxation.



Case of E. N.—Left foot in standing position. Cuboid measurement 1 mm.

#### MECHANICAL MEASUREMENTS

	R. F. Z. mm.	R. F. W. mm.	Difference mm.
Os Calcis .....	16	12	4
Tibia .....	93	89	4
Astragalus .....	47	39	8
Scaphoid .....	44	37	7
Internal cuneiform .....	25	18	7
Base Ith metatarsal .....	21	14	7
Cuboid .....	13	7	6

	L. F. Z. mm.	L. F. W. mm.	Difference mm.
Os calcis .....	13	11	2
Tibia .....	93	85	8
Astragalus .....	44	37	7
Scaphoid .....	40	32	8
Internal cuneiform .....	22	15	7
Base Ith. metatarsal .....	17	10	7
Cuboid .....	9	6	3

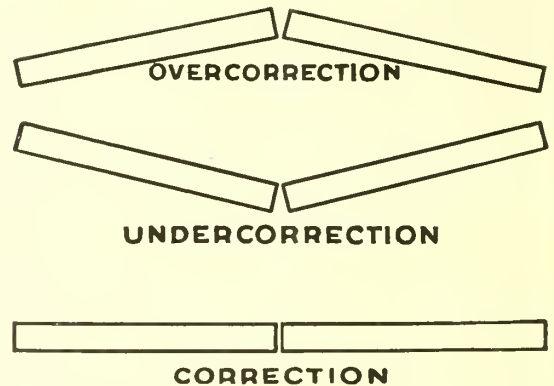
*Diagnosis.*—Certain evidence as standing on his feet for long hours, a great deal of dancing, necessitating the use of anterior part of feet, indicate a mechanical etiology; yet there is also evidence of some form of arthritis that could have been the etiological factor. One thing is certain at present—there is an active arthritis with mechanical derangement, subluxation, dislocation, and sagging down and a great deal of muscle contractions with the main pathology in the anterior part of the foot. This may be called a case of arthritis deformans, the main pathology being in the anterior part—the mechanical measurements are not so important as in the preceding case. However, the mechanical measurements

show that when this individual stands or walks there is a chance for the bones in the long arch as well as the anterior to sag down still more in various degrees and if any treatment was to be carried out, especially in the early part of the disease, the mechanics should have been considered.

Right Foot.—The general measurements are higher than in the left except the tibia which is the same as the left foot; the comparative measurements are greater except the tibia, which is smaller by 4 mm. than on the left; the scaphoid smaller by 1 mm.; internal cuneiform and base of first metatarsal is the



Case of H. W. J.



Bone should be approximated at 180 the long axis forming a straight line.

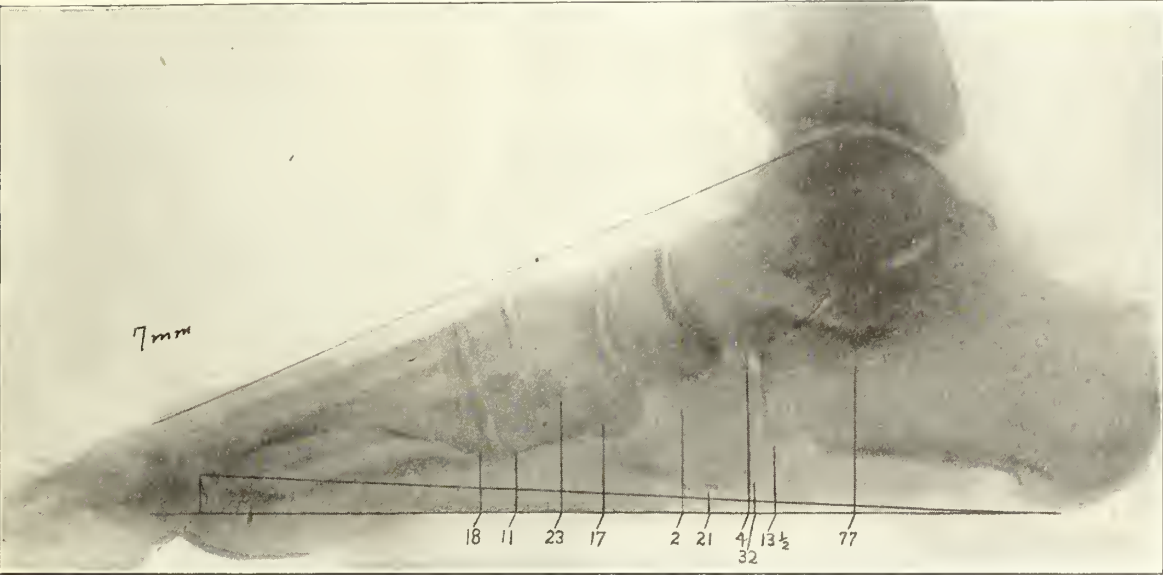
same as that of the left. All these facts are to be considered in the treatment as well as the physical findings. The treatment in this case was not carried out as owing to the weakness, long duration of the disability and weak heart, an operation or forcible manipulation was considered dangerous. Padding and adhesive were used with little improvement and but not for long, as the patient drifted away. He has been treated all these years for rheumatism and the mechanics has not been considered.

CASE 3.—Mr. M. T., aged 17, farmhand, ten to twelve hours a day on his feet. General health good,

family history negative. Duration of present condition, five years or more. Symptoms and physical examination: Left foot: in walking experiences a tired feeling below and on the outer side of ankle in a circle to the inside; also stiffness in the tendo achilles, which is more pronounced when trying to walk straight. Stands and especially walks with adduction and inward rotation; contraction of the extensor muscles, especially of the extensor longus hallucis and tendo achilles. Right foot about the same but not as pronounced.

	R. F. Z. mm.	R. F. W. mm.	Difference mm.
Os calcis .....	30	29	1
Tibia .....	97	97	0
Astragalus .....	54*	54	0
Scaphoid .....	53	52	1
Internal cuneiform .....	32	30	2
Base Ith. metatarsal .....	26	25	1
Cuboid .....	18	18	0
External cuneiform .....	38	35	3
Middle cuneiform .....	47	46	1

in the treatment. The comparative measurements are particularly interesting; they are rather small; we are dealing here with strong joints, strong foot structures that do not easily yield to the superimposed weight; some are entirely unchanged and marked "zero." The measurement of the left foot is very striking; the scaphoid goes up 1 mm., the internal cuneiform 5 mm. It indicates that these two bones do not get the weight of the superimposed body at all, and it is diverted to the outer side of the foot the cuboid getting some of the weight, 5 mm. down. On the right foot the scaphoid and internal cuneiform go down with superimposed weight and indicates that they are subject to the weight of the body; the cuboid of the right seems to be neutral—"zero." The treatment in this case was cutting both tendo achilles and the left extensor hallucis, thereby lowering the bones of the long arch. The mechanical measurements should have been considered in the figuring of an apparatus, but it was not carried out, due to the unwillingness of the patient.



Case of A. A. G.—Unskilled, ready-made plate pushed up the head of the metatarsal too high (overcorrection) with resulting pathology.

	L. F. Z. mm.	L. F. W. mm.	Difference mm.
Os calcis .....	34	29	5*
Tibia .....	101	100	1*
Astragalus .....	58	58	0*
Scaphoid .....	55	56	1†
Internal cuneiform .....	32	37	5†
Base Ith. metatarsal .....	28	27	1*
Cuboid .....	20	15	5*
External cuneiform .....	49	48	1*
Middle cuneiform .....	40	35	5*

\* Down. † Up.

Diagnosis.—There is no evidence of infectious arthritis being the etiologic factor; most probably there is a congenital element as shortened tendo achilles and foot extensors as well as skeletal abnormalities to be blamed. The Roentgen ray shows no inflammatory changes. The general measurements are abnormally high and may be taken as a standard of what high measurements should be considered and well illustrates the point in the text that in treating "flat foot" we must simply correct and not overcorrect, otherwise we create a pathologic condition by placing the bones too high. The general measurement: Left foot larger than that of the right foot, except the middle cuneiform (left foot 40 mm., right foot 47 mm.), which fact should be considered

RECAPITULATION

1. While it is too early to state definitely the full value of these measurements, it can be stated that a better general understanding of the mechanical pathology is obtained.
2. Certain conditions of the bones of the feet overlooked by other methods of diagnosis may be ascertained by the measurements advocated.
3. The external and middle cuneiform as well as the others take part in the pathology.
4. Overcorrection of bones is to be avoided as well as undercorrection, for the first produces the same pathology as the latter.

501 Chambers Building.

REFERENCES

1. Sobotta: Atlas and Text-Book of Human Anatomy, p. 106.  
2. Bradford and Lovett: Orthopedic Surgery, p. 565.  
3. Belove: Flatfoot, Southwest Jour. Med. and Surg., 1914.  
4. Reiner, H.: Zur Pathogenese des Hallux valgus, Ztschr. f. Orthopädische Chirurgie, xxxiv Band, 34 Heft, p. 553.  
5. Joachimsthal, G.: Der Plattfuss, Handbuch f. Orthopädischen Chirurgie, ii, Band 678.

# RESULT OF PHYSICAL EXAMINATION OF FIVE HUNDRED YOUNG MEN

HORACE T. PRICE, M.D.  
ST. LOUIS

These physical and medical examinations were undertaken by the Efficiency Board of St. Louis for the purpose of selecting men physically qualified to fill various positions in the city service; 1,432 persons have been examined, some rigidly, others superficially, depending on the requirements of the position. Those taking the examinations under present discussion numbered 627, but we have not a complete record of that number because as soon as an applicant was found to be ineligible, due to being under height, under or over weight for a given height, for age, or for any sufficient lesion, that applicant was not permitted to go further, which will explain the varying number of men recorded.

A standard of height and weight was established and it was found that those who were well within such requirements proved to be in much better condition than those close to either the maximum or minimum. The average weight of those accepted was 154.3 pounds. One hundred and seventy-seven men were rejected as under weight for height, thirty-one for over weight; fifteen were under height and under weight, while eight were both under height and over weight.

The average chest measurement, at rest, for 350 men was 35.28 inches. At deep expiration, 33.78 inches, and at forced inspiration, 37.15 inches. The chest expansion ranged from 1 inch to 6 inches, with an average for all heights of 3.3 inches.

The girth at the umbilicus measured from 28 inches to 38.5 inches, with an average of 32.38 inches for 346 men. Three hundred and thirty-seven had an average of 3 inches less abdominal girth than chest at rest, with a range of from zero to 7.5 inches. Nine had a greater girth than chest measurement.

Tests were made of the mobility of all joints by voluntary movements of fingers, wrists, elbows, shoulders, toes, ankles, knees, hips and back. Agility tests were based on running, hopping and ladder climbing, one group having also to climb an 80-foot ladder to the top of a six-story building. Strength tests of the various muscle groups were made by such exercises as chinning on a horizontal bar, dipping chest to floor, raising twice over the head a dumb-bell weighing 106 pounds, and by the dynamometer, an instrument which when grasped in the palm of the hand and the fingers forcibly flexed records in kilos., the strength of the forearm muscles. It is also used in testing other groups, as of shoulder, thigh, etc. The average for 322 men with the right hand was 45.3 kilos., with a minimum of 29 and a maximum of 60 kilos.; for the left hand, an average of 43 kilos., mini-

um 26, maximum 60 kilos. In other examinations of lower grade, of 221 men of all ages the average for the right hand was 38.4, left 36 kilos.

Vision was tested by the Snellen's test letters at a distance of 20 feet. Of 382 men, forty-three had vision of 20-30 to 20-40 with one or both eyes, while five had 20-50. Two of this number had defective hearing as tested by the whispered voice at 10 feet.

Inspection showed a mild grade of anemia in two cases, slight conjunctivitis in three, slight edema of the lower eyelids in one, enlargement or inflammation of the tonsils in sixty-three, decayed, broken or absent teeth in sixty-two, inflammation of the gums in three, slight enlargement of the thyroid gland in two, lack of vaccination scar in two, carbuncle of arm in one, small umbilical hernia in two, and inguinal four, one postoperative, one undescended testicle, apparently still in the abdomen, one testicle lodged in the inguinal canal, large and inflamed, three testes showed marked atrophy, said to have been due to parotitis, gonorrhea in one, varicose veins of the scrotum nine, and of the legs six, bunions two.

Pulse and temperature were taken before exercise but while standing so were expected to be a trifle higher than if taken in a sitting position. The pulse of 419 men averaged 88.3 beats per minute, ranging from 60 to 120. Temperatures ranged from 97 to 101, averaging 99 F. These high figures may be partly accounted for by the defects found in the tonsils, teeth, etc., but mainly seemed to be caused by nervousness due to the examination. Moderate arteriosclerosis was noted in one case. A systolic murmur at the apex was heard in nine cases, an intermittent beat in one. Blood pressure was taken sitting with a mercurial instrument, auscultatory method. In three cases the sound could not be heard at the elbow, and the systolic was read by the finger. The systolic was read as the mercury descended, as it was several times noted that the sound could be heard higher while ascending than when pressure was being released.

For 409 men the pressures were as follows: Systolic, minimum, 100 mm. Hg, maximum 175, average 129. Diastolic, minimum, 45 mm. Hg, maximum, 110, average, 80.7. Pulse pressure, minimum, 20 mm. Hg, maximum, 80, average, 48.3.

To explain more fully, we quote the following table giving the number of men having the same pressures within a scale of ten.

Systolic		Diastolic		Pulse Pressure	
mm. Hg.	Men	mm. Hg.	Men	mm. Hg.	Men
100 to 109....	4	45 to 49....	1	20 to 29....	7
110 to 119....	66	50 to 59....	1	30 to 39....	66
120 to 129....	135	60 to 69....	22	40 to 49....	129
130 to 139....	110	70 to 79....	122	50 to 59....	126
140 to 149....	67	80 to 89....	190	60 to 69....	75
150 to 159....	23	90 to 99....	65	70 to 80....	6
160 to 169....	3	100 to 110....	8		
170 to 175....	1				



The case showing a diastolic of 45 had a systolic of 100. Another had a diastolic of 55 with a systolic of 115. The one showing a pulse pressure of 80 had a systolic of 150.

In other examinations of men of all ages we have had systolic pressures of 220, with apparent good health.

In the examination of the urine, tests for sugar and albumin only were made, Haines solution and the heat and acetic acid tests being used. In 410 specimens, sugar was found once. Albumin varying in quantity from a trace to a very heavy precipitate, was found in 125 specimens collected at the time, or 30 per cent. at the first examination. We were desirous of examining a second specimen voided twenty-four hours later and did so in all which could be secured, but as many of these men had failed to pass other tests they of course did not return so no figures are available to show the total number of persistent albuminurias.

In another examination of 436 men, of all ages, sugar was found in three and albumin in 214.

The figures quoted throughout may not be startling, but when it is considered that these are men not over 35 years of age, applying for positions requiring a high grade of physical fitness and claiming to be in perfect health without knowledge of any deviation from the normal, it may be well to pause long enough to consider the reasons for such findings, as well as to think of a remedy therefor. The tests of strength, agility and endurance were not performed any too well for active young men accustomed to hard muscle use. The tests of vision showed a neglect of the eyes which should not be. So many affected tonsils is bound to give rise to a number of more serious disorders in the future, just as the neglected teeth will do. The high pulse rate, if induced by nervous fear of examination, should not persist for hours, as some did, and would seem to indicate an instability of the nervous system inexcusable in this type of man. Taken as a whole, they were probably as good a set of men as could be found in the city, and yet they made what must be regarded as a poor showing.

Then what, we may ask ourselves, may be done to improve the condition of our men—for they are not improving themselves. Some advocate a compulsory military service, partly with that object in view; that would likely be of great benefit but we are not ready to go so far at present. But we do need, and very much need, some manner of medical supervision over all the people. There should be periodical health examinations for every one, thorough inquiry into the habits of life, work, exercise, play, sleep, food, drink, etc., with a thorough search for incip-

ient disease or disease tendencies, and the proper advice covering deficiencies. Several large insurance companies are now giving this privilege, without extra cost, to their policy holders, either through the Life Extension Institute or their own physicians, in an endeavor to lengthen life, and many of the largest manufacturing firms of the country insist on such examination of all employees. All large cities have civil service rules which provide for medical examination of a major portion of the city help. And great good is resulting therefrom, not alone to the one examined, but by bringing him to his physician it works to the advantage of both.

With the limited number of men here considered, we have advised many to consult their physician, oculist or dentist, as the case required, and it was usually done, to the advantage of both physician and man, but not to ourselves, as we were frequently censured for finding albumin or other defects not present to other observers. Other methods worthy of consideration are a workmen's compensation act and a compulsory insurance act, the former now in effect in many states of the Union, the latter in several foreign countries; both of them would have a decided tendency to bring into contact the physician and the people in a manner which is not thought of today.

Finally, these examinations, under the civil service rules properly administered, as they now are, you can readily perceive, will give to the city service, more competent help with a consequent saving of money to the city, will point out to many persons, physical defects which may be unsuspected, leading to their timely correction, and I believe constitute a strong plea for the continuation of the civil service as at present conducted by the Efficiency Board of St. Louis.

Metropolitan Building.

#### A CASE OF PERINEPHRITIC ABSCESS WITH SPONTANEOUS RECOVERY\*

THOMAS M. PAUL, M.D.  
ST. JOSEPH, MO.

Mrs. S., 63 years old, housewife, mother of four children, was brought to me by her family physician from a small town in Iowa, Sept. 5, 1915.

Some years ago, she was thrown from a vehicle, striking with her whole weight against a spring. The blow was delivered on the left side just below the last rib. The pain caused by this injury was not severe enough to make her go to bed and the soreness persisted for several weeks.

In July, 1909, some time after the preceding accident, pain developed at the site of injury and blood appeared in the urine. This condition persisted for

\* Read at the 59th Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 8-10, 1916.



two years. She was then taken to a physician in a city in Iowa, who irrigated her bladder. Coincident with this, the blood in the urine disappeared and an acute pain in the bladder developed. The treatment here referred to, had to be discontinued after several weeks, on account of its making the disease worse.

Before coming to see me, pain in the left loin and bladder has been continual and pus and blood have constantly been present in the urine. At times the patient passed calculi. Intermissions in pain would last only two or three weeks at a time, the last one occurring over a year and a half previous to the time I first saw her. She never felt a sensation of "something giving way" in her left side.

At the first visit, patient presented the appearance of a rather thin woman, past middle life, with an expression on her face which denoted constant suffering. She stated that she continually experienced an intense desire to urinate. The urine withdrawn from the bladder was small in quantity, very cloudy, and slightly blood tinged. Microscopically it showed many pus cells, many red cells and colon bacilli; no casts and no crystals were present. The bladder capacity was six ounces. Repeated distention of the bladder, with boric acid solution caused such intense suffering, before a clear return fluid could be obtained, that cystoscopic examination was deferred. Bimanual palpation of both kidneys revealed nothing abnormal. Combined examination of the pelvic organs determined nothing noteworthy. Skiagraphic plates showed several phleboliths, none of which were in a position to admit of their being mistaken for calculi.

The patient was sent to St. Joseph's Hospital and put on a mixture containing codein sulphate, sodium benzoate and tincture of belladonna. In addition to this, a chloral, strontium bromid and tincture of digitalis mixture was given at bed-time to produce sleep. The next day, the patient felt enormously relieved. Aside from temporary annoyance from brisk cathartics to move the bowels, the patient did well for twelve days, when the sedative diuretic mixture was withdrawn and capsules of salol and hexamethylenamin substituted. Agar agar was given to produce normal bowel movements. At one time, the hexamethylenamin caused vesical irritability and had to be discontinued and the sedative diuretic resumed for a few days. After this the patient steadily improved and at the end of four weeks she left the hospital and visited my office.

At each office visit a soft gum catheter was inserted, and after thoroughly emptying the bladder in this manner, a silver salt solution was instilled through the catheter. The most scrupulous care was exercised in this procedure to avoid reinfection. Beginning with 5 per cent. argyrol and ascending to 20 per cent., the solution was changed in a few days to protargol, commencing at 0.25 per cent. and going up to 4 per cent. At the end of a week the protargol was supplanted by solutions of nitrate of silver, commencing with one grain and ascending to ten grains to the ounce of distilled water. After each silver nitrate instillation, the patient would experience a sensation of tenesmus and a strong desire to urinate, subsiding in about an hour.

At the end of three weeks, hydrostatic distention of the bladder was begun. It was found that the patient could tolerate pressure from neither a Valentine irrigator nor a Janet-Frank bladder syringe. The simple method of a glass funnel, connected to the

catheter by a rubber tube and piece of glass tubing, was therefore adopted. It is important to note here that at the beginning of this treatment the patient would complain of pain in her left kidney region when the distention was greatest, and a relief of this sensation when the funnel was lowered. About this time the patient brought me a "calculus" she had passed. It was half as large as a pea, irregularly oval in shape, very soft and friable and of a light yellow color. It seemed to be composed only of fibrous tissue. As a result of distention, the bladder capacity was gradually increased to eight ounces.

Ten days after the distentions were begun, the urine became clearer and a cystoscopy was performed. The roof and sides of the bladder were considerably congested but otherwise normal. Right ureteral orifice normal, left ureteral orifice obscured by a small papillomatous growth. Small papilloma on inter-ureteric ligament, about midway between ureteral openings. Both papillomata were about half the size of a pea. Many variously sized and irregular shaped superficial ulcerations could be seen on the bladder floor. A fistulous opening about one-fourth inch in diameter, and irregular in outline, could be plainly seen in the left horizontal plane about three-fourths of an inch above and behind the left ureteral orifice.

A cystoscopy done one week later, showed that the general vesical congestion had greatly decreased, that the fistulous opening just described, had almost healed, and that the papillomata had disappeared. Both ureters were catheterized and the separate urines were found to be normal, save for the presence of fresh blood cells. These were ascribed to the traumatism incident to introducing the catheters into the ureters, and microscopic examination of the mixed urine drawn from the bladder five days later, corroborated this supposition by showing their absence.

An observation cystoscopy was done one week later and at this time the remains of the fistulous opening could only be vaguely seen and the ulcers on the vesical floor were fewer and smaller.

Between cystoscopic examinations, distentions with funnel, rubber tube, and catheter were continued, and one week after last cystoscopy, patient was allowed to go home. Toward the end of treatment by vesical lavage, no pain could be produced in the left loin, no matter how high the funnel was raised. At the time of leaving, the urine had become clear and microscopically normal. Bladder was evacuated at intervals of three hours or longer, patient getting up for this purpose, once during the night. Urination could be deferred half an hour from the time the desire arose.

This case conclusively teaches us the following important facts: 1. The use of the cystoscope is imperative in nearly all, of not all, genito-urinary cases. Congenital malformations, stricture, or greatly enlarged prostate in which introduction of the instrument is mechanically impossible, or infection confined to the anterior urethra, in which case bacteria would be carried back into the bladder, are the only important contraindications to its use. If nothing can be learned by cystoscopy and ureteral catheterization, it will at least do no harm. In this instance the fistulous opening near the left ureteral orifice, could have been discovered otherwise only

by cystotomy. 2. Cystoscopy should never be performed, in the absence of urgent symptoms, when preliminary treatment will make this procedure less annoying to the patient, and especially when local vesical medication will decrease the likelihood of carrying infection into the ureters during catheterization. 3. Repeated cystoscopic examinations are necessary in nearly all, if not all, genito-urinary cases to confirm previous diagnosis, to observe the results of treatment and for the purpose of treatment. 4. The kind of a silver salt and the strength of the solution in which it is used should depend on the physician's general experience with it and the reactions produced by it in a particular case, and not on statements made about it by its manufacturer.

My diagnosis in this case is: This patient developed a left perinephritic abscess following a traumatism and the pus formed in the perirenal fat burrowed down behind the peritoneum along the course of the ureter and burst into the bladder. At the time the patient was brought to me, this abscess had drained itself and the distentions of the bladder with an antiseptic fluid, washed out the abscess cavity through the fistulous tract ascending to it. This is evidenced by the pain in the left loin caused by elevating the funnel during lavage and the relief of this pain on lowering the funnel. The abscess cavity and fistulous tract, after cleansing in this manner, closed from above downward. The calculi were merely small masses of closely packed areolar tissue, entering the bladder through the fistulous opening.

The old idea that "pus in the urine and pain over a kidney" calls for at least an exploratory incision down to that organ, is unfortunately still entertained by some surgeons who do not take advantage of the information to be gained by cystoscopy before operating. Had the abscess cavity in the perirenal fat in this patient not closed as a result of lavage through the bladder and ascending fistulous tract, an incision for drainage through the loin might have been necessary. The fact that no suppuration existed in the kidney substance, pelvis, or ureter was conclusively shown by examination of the urine drawn by catheterization of the left ureter.

Physicians and Surgeons Building.

#### AN UNUSUAL COMPLICATION OF APPENDICITIS\*

##### Report of Case

L. A. TODD, M.D.  
ST. JOSEPH, MO.

A boy 16 years old was brought to the hospital on May 15, 1915, with a typical picture of acute gangrenous appendicitis of several days' duration, with

probable perforation about twenty-four hours previously. Operation was performed without delay. A rather extensive degree of acute peritonitis, with extensive matting together of intestinal coils and omentum was encountered. The appendix was located surrounded by an abscess below and to the inner side of cecum. It was removed with difficulty. The organ was of large size, greatly thickened throughout its whole extent and presented a large, gangrenous area near the center, with a perforation through which a concretion of large size protruded. One other concretion lay in the lumen distal to the side of perforation. Owing to the thickened appendix wall, as far as the cecum, as well as thickening of the cecal wall itself, no attempt was made to turn in the stump, as is usual, with a purse string suture. Instead of this the base of the appendix was ligated with No. 1 chromic gut, after crushing slightly about one-half inch from the cecum. Drainage was instituted with one rubber tube and one cigaret drain. The post-operative course was uneventful and the boy left for home in about three weeks with a superficial discharging sinus.

The patient did well for about a month, when he began to suffer with attacks of acute abdominal pain, colicky in nature, of short duration, located in the right iliac region and unaccompanied by febrile reaction. Bowels were rather costive. After free bowel movement attacks of pain would disappear. The wound itself continued to discharge off and on, but at no time very freely. The attacks of pain continued with greater frequency and the boy was again brought to the hospital in November, about six months after his operation. Examination at that time revealed nothing except considerable tenderness on deep pressure in the region of McBurney's point. The boy was anesthetized and an attempt was made to locate a sinus in the cicatrix, but no sinus existed. Part of the cicatrix was excised and the abdomen opened. The omentum was found adherent to the peritoneum at the site of the drainage opening. One or two coils of small bowel were also adherent. On introducing a finger through the opening, a hard, smooth object was felt to the right and a little behind the cecum. It was attached partly to the lateral abdominal wall. The body felt so hard that for a few minutes I had the fear that it was a detached part of the drainage tube that had been used at the first operation. With some difficulty the mass was freed and brought into the wound. I was surprised to find that this mass, which was about  $1\frac{3}{4}$  inches in length and  $\frac{3}{4}$  inch in width, occupied the site of the appendix, being attached at its base to the cecum, at the junction of the longitudinal bands. The body was ligated at the base and it was then seen that a definite lumen existed. The stump was then inverted into the cecal wall with a purse string stitch. The abdominal wound was closed without drainage. The mass removed consisted of a large, hard, fecal concretion, nearly the size of a large olive, encapsulated within a definite wall structure, which evidently was continuous with the stump of the old appendix. On longitudinal section the walls consisted at the proximal end of mucous membrane, and distally of fibrous tissue and peritoneum.

The principal point that I wish to emphasize in this rough summary is the possibility of the development of a fecal concretion in the stump

\* Read at the 59th Annual Meeting of the Missouri State Medical Association, Excelsior Springs, Mo. 8-10, 1916.



left after ligating the appendix. The pathologic picture here presented seems to me to bear out the supposition that a concretion did form in the stump proximately to the ligature and by accretion plus the inflammation that was already present to a marked degree, the concretion enlarged, distending the appendix stump gradually, until it finally reached the size found at operation, that is  $1\frac{3}{4}$  by  $\frac{3}{4}$  inch. The symptoms following were nearly identical with those of cases of recurrent appendicitis, in which fecal concretions are found. This is the first experience of the kind that I have ever noted, and I do not remember of ever having seen it mentioned in any text book description or monograph on the subject.

Physicians and Surgeons Building.

#### INDICATIONS AND METHODS FOR REMOVAL OF FAUCIAL TONSILS\*

W. D. BLACK, M.D.  
ST. LOUIS, MO.

In selecting this subject my idea is to present definite reasons for the removal of the tonsils, reasons which are not always clear to the general practitioner. Until a few years ago there were apparently only two indications for removal. One was when the tonsils protruded beyond the pillars (hypertrophic), and the other was after attacks of quinsy. We know now that in not every case of hypertrophy of the tonsils they need be removed, and that many tonsils that have degenerated and atrophied and cannot be seen without pulling the anterior pillar forward are often of the dangerous type.

The indications for removal may be enumerated as follows: In certain cases of tonsillitis of the catarrhal type when the patient has frequent attacks; repeated attacks of acute follicular or cryptous tonsillitis; in every case of quinsy or peritonsillar abscess.

The hypertrophic tonsils should be removed when the tonsil is enlarged and the crypts are filled with cheesy plugs; when pus exudes on pressure around the tonsil; when they interfere mechanically with the speech, giving the throaty tone found in these cases; in certain cases of chronic catarrhal laryngitis.

In chronic degeneration the tonsils are often small and difficult to examine and are often covered by the widening of the pillars, so-called submerged tonsil. It is in these cases that we find a bad odor and have a complaint of bad

taste in the mouth. Before satisfying oneself about them one should thoroughly exclude pyorrhea, carious teeth, nasal sinus disease, diseases of the stomach, constipation, etc.

It is common knowledge that 85 per cent. of ear troubles are due to nose and throat disease and a good proportion of these cases are due to infection of the tonsil and adenoid. I think it safe to state that in every case of ear disease, except otosclerosis and advanced deafness from middle ear catarrh, the tonsils and adenoids should be removed if diseased. I might add that the patients in some of these chronic middle ear nonsuppurative cases are benefited by operative work on the nose if pronounced pathologic conditions exist.

Adenitis (cervical) due to tonsillar infection and adenitis due to tuberculosis when there is no lung involvement call for removal of the tonsils.

The tonsils should be removed in cases of repeated attacks of acute bronchitis following acute tonsillitis; in certain cases of chronic bronchitis, when the etiology points clearly to tonsil and adenoid trouble; in a small proportion of asthmatic cases in children when the asthmatic attack follows acute infection of the faucial and nasopharyngeal tonsils; and in acute or chronic articular rheumatism when the diagnosis is made by exclusion and when there is a pathologic condition of the tonsil.

The tonsils should be removed in certain cases of acute nephritis which are preceded by an acute tonsillitis or in case the tonsils show infection, and when diseased tonsils are found in chorea.

Arthritis deformans, when you cannot find any other apparent cause and when you have diseased tonsils, calls for their removal.

We know that many cases of valvular disease of the heart is caused by articular rheumatism. We also know that a fair proportion of cases of rheumatism are due to diseased tonsils. In those cases in which the etiology is clear the tonsils should be removed as a prophylactic measure to prevent further damage.

Now this may not have covered all the ground, but what I have given will cover the greater part of it and is the result of personal experience and observation.

In regard to the methods of removal, I would state that there are only two methods which give entire satisfaction. One is the dissection method and the other is the Sluder operation. The dissection method I have practically given up and use the Sluder operation in 95 per cent. of my cases.

Metropolitan Building.

\* Read before the meeting of the Southeast Missouri Medical Association, Oct. 18, 1916.



# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

JANUARY, 1917

### EDITORIALS

#### LEGISLATION AFFECTING THE MEDICAL PROFESSION AND THE PUBLIC HEALTH

This session of the General Assembly promises to hold more than ordinary interest for the medical profession and others who have labored to establish modern methods of conserving the health of the people. Governor Gardner has already begun to redeem his preelection promise that he would take the eleemosynary institutions out of politics and place competent men at the heads of these institutions. He has not promised anyone an appointment and will take time to ascertain the fitness of applicants before selecting his appointees. He has called a conference to study the problem of penitentiary control to which he invited representatives from our Association. Later he called a conference on state hospitals, composed largely of members of our Association. At both conferences it was clearly evident that the state was in no position to improve conditions in any department until the financial problem is solved. Governor Gardner is courageously attacking the very heart of the trouble and has laid bare to the gaze of the people the naked truth about the state's financial condition. The state's income from all sources is just about a million dollars less than expenditures. Governor Gardner suggests several means of increasing the income and will endeavor to get the legislature to assist him. The alternative is to retrench in every department of state activity, which will reduce the efficiency of the government. The medical profession represented by the Missouri State Medical Association will give the governor its sympathetic support in working out the problems that affect the health of the people.

The measures which will require attention from the physicians are: (1) A bill to remove the state hospitals from political control; (2) the workmen's compensation bill; (3) the optometry bill; (4) the chiropractor bill; (5) the chiropodist bill; (6) the report of the Commission for the Blind; (7) the report of the Children's Code Commission. In addition to these matters the legislature will probably be asked

to pass laws to license mental healers, mechanotherapists and similar nondescript cults.

The medical profession will not be so well fortified at this session of the legislature as it was in the past because of the loss of Dr. Allee, Dr. Lutz, Dr. Wallace and Dr. Schauffler. Each of these men was held in high esteem by a wide circle of admirers and friends, and were loyal to the organization and to the health interests of the people, but the personnel of the legislature is of a high order and many of the members have served in former years and know that the objects and purposes of the organized medical profession are to conserve the health of the people, to elevate the standard of the practice of medicine and to preserve the integrity of our medical laws.

#### STATE HOSPITALS

Our committee appointed to draft a bill for the control of state hospitals is working industriously and will have it ready for introduction soon after the legislature meets. The bill is designed to establish a board of control for all eleemosynary institutions. It will undoubtedly reduce the cost of maintenance of the hospitals and establish business-like methods for conducting them. The board of control will be bi-partisan and the terms of members expire in different years so that there shall always be experienced members in control. The appointment for superintendents will be on a non-political basis.

The conference called by Governor-elect Gardner to investigate and hear arguments concerning the advisability of changing the present plan of administration of the state eleemosynary institutions met in public session at the Planters Hotel, St. Louis, on Dec. 20, 1916. Throughout the session, which lasted for the greater part of the day, the arguments all strongly tended to favor the making of some change in the present methods of administration and the discussions took up for the main theme, the question of a central board of control and the manner in which it could be financed.

The question of just what institutions should be under such a central board was discussed, it being generally considered that the four state hospitals for the insane, the colony for the feeble-minded, the sanatorium for tuberculosis and the two soldiers' homes should be included. There was considerable doubt as to the advisability of including the state school for the deaf and the one for the blind, and this was left undecided.

At the conclusion of the public hearing the conference went into executive session and passed resolutions in effect as follows:

1. That the eleemosynary institutions should be administered by a central board of control.
2. That the State Board of Charities and Correction be continued in its present capacity.

3. That a committee of three members of the conference be appointed to confer with the committee of the Missouri State Medical Association.

4. That a survey of the state with regard to the insane and feeble-minded be made by the National Committee for Mental Hygiene.

5. That the entire membership of the conference appear before the legislature when the bills to be drawn up are presented.

#### WORKMEN'S COMPENSATION LAW

This bill has the approval of the Council on Health and Public Instruction and of the Executive Committee of our Association. On another page we publish the sections that affect physicians and their fees. Our Association had a representative on the Commission which drafted the measure and he carefully scrutinized the proposed bill and assisted in writing it. It is believed that the measure deals fairly with the doctors, and it has the approval of the various organizations that will be affected. Copies of the sections affecting physicians have been sent to county societies for their consideration and report.

This bill will be bitterly opposed by a certain class of lawyers known as ambulance chasers and damage suit lawyers. It is estimated that two million dollars are annually spent in damage suits in St. Louis, about one half of which goes to these lawyers. With the passage of the workmen's compensation law their income will disappear and their occupation with it. Under the law, if it is passed, the injured workman will receive a reasonable sum without resort to the courts or payment of lawyers' fees. This bill will be supported by the Association, unless serious objections are charged against it by the county societies.

#### THE OPTOMETRY BILL

The optometrists have completed their bill and will again ask the legislature to pass it. Copies of this bill were sent to the county societies sometime ago and it is printed on another page in this issue. Members should read it carefully, especially the parts that refer to the qualifications for license. It will be observed that no standard is established by which one could judge what constitutes a competent optometrist. Everyone who has been fitting glasses will at once become a registered optometrist if the law passes, and thereafter the only requirement will be a two-year's study in the office of a registered optometrist or a two-year's course in a college maintaining a "standard" satisfactory to the board of optometry. Any person who is over 21 years of age may be licensed under these conditions because the bill does not provide for any educational qualifications. The

bill does not prohibit the use of titles nor provide in any way against misleading the people concerning the medical training and education of optometrists. Under the provisions of this bill optometrists would be legally privileged to fit glasses for any defect of vision whether due to a mere error of refraction or to a disease of the eye or other organs. The bill is a frank effort to open a side door to the healing art for a certain class of persons without requiring them to comply with the medical practice law. Optometrists are now clamoring for an extension of their work to include the treatment of diseases of the eye. The present bill is more vicious than any they have introduced in this state. Far from conserving eye-sight this bill would make opticians and jewelers a real menace to human eyes, human health and even life. It should be opposed vigorously and is condemned by our Council on Health and Public Instruction.

#### THE CHIROPRACTOR BILL

The chiropractors will again seek recognition of their practices. Their work is illegal and their adherents not so numerous as among optometrists. The death of one or two persons while under their manipulations has dampened their enthusiasm somewhat, but they will find someone thoughtless enough to introduce their bill. Of course, it must be opposed by all physicians and right-thinking citizens.

#### CHILDREN'S CODE COMMISSION

The Children's Code Commission has given the subject of child life extensive study and will recommend far-reaching and constructive legislation on this subject. The principal recommendations of the report will advise legislation to improve conditions among destitute and neglected children; delinquent children; defective children; child labor; the medical inspection of school children, and the yearly examination of midwives. Our members will be informed of the provisions of the bills as they are introduced by the commission so that intelligent action may be taken by the county societies.

#### COMMISSION FOR THE BLIND

The Commission for the Blind has investigated the condition of blind persons for the purpose of rendering aid where necessary and sought to learn the status of persons afflicted with serious eye troubles in order to prevent blindness. Our Association has cooperated with the commission and much good has been accomplished in the short time that the commission has been operating. When the report is published our members should give it careful consideration and assist in promoting the passage of constructive legislation for the conservation of vision.

## HONOR WHERE HONOR IS DUE

The Honor Roll has celebrated its second anniversary and started well on its third. Of the thirty-eight county societies earning this distinction in 1916, twenty of them likewise enjoyed such honor in 1915. And while the slogan adopted by these societies, "Every Member Every Year," is only complying with the by-law which states, "An assessment of three dollars (\$3.00) per capita on the membership of the component societies is hereby made the annual dues of this Association," it takes both individual and concerted effort to enable a society to live up to this high ideal, and therefore we believe they deserve special recognition at this time. They are as follows, listed in the order of their position on the Honor Roll for 1916:

Webster, 13 members; Benton, 16 members; Schuyler, 10 members; Atchison, 12 members; Clark, 12 members; Madison, 11 members; Sullivan, 11 members; Phelps, 11 members; Camden, 4 members; Barton, 9 members; Henry, 40 members; Putnam, 12 members; Ste. Genevieve, 10 members; Cooper, 17 members; De Kalb, 8 members; Platte, 18 members; Grundy, 21 members; Adair, 9 members; Ray, 19 members; Carroll, 14 members.

RECOMMENDS STATE SURVEY OF  
INSANITY AND FEEBLE-  
MINDEDNESS

The annual conference of the State Board of Charities and Correction was held at Columbia, Mo., November 26-28. The program was replete with many interesting titles, but many speakers were absent so that a large part of it was not carried through. Among the discussions of interest to the medical profession was that regarding the state eleemosynary institutions and their removal from political control. Hardly a dissenting voice was raised against the advisability of such action if it could be made possible. Representatives of the Missouri Society for Mental Hygiene had introduced a resolution which was passed by the general session of the conference to the effect that the conference indorsed and heartily approved of a survey to determine the extent of insanity and feeble-mindedness in this state, the degree of care which the state now provided for these classes, and, on the basis of this investigation, to recommend such methods of betterment as seemed advisable, and that the offer of the National Committee for Mental Hygiene to make such a survey, without cost to the state, be accepted. Action similar to this was taken a year ago, but Governor Major would not sanction the survey. Greater success is expected this year.

UNRELIABILITY OF LITTLE USED  
DRUGS

It is established that widely used drugs are of a high degree of purity because of the competition under which they are sold. It is equally well proven that little used drugs are notoriously unreliable for the reason that the small demand for them has not stimulated competition.

The following is taken from a report<sup>1</sup> of the work done by the A. M. A. Chemical Laboratory:

In the past, pharmaceutical houses, ever anxious to market something new on the slightest provocation, have placed on the market in the form of pills, powder, elixir, ampule, etc., every drug for which some sort of medical recommendation could be found. In marketing these dosage forms the manufacturer has too often been little concerned about the quality of the drugs used.<sup>2</sup> Just at present, for instance, some interest is being shown in iron cacodylate; but while manufacturers appear to be most ready to take advantage of this interest by offering the drug in the form of ampules, etc., they have given little help toward the establishment of standards for this arsenic compound. Manufacturers are ever ready to sell drugs of all sorts, but in view of the small demand they cannot or will not safeguard the identity and purity of such drugs.

Physicians who are inclined to experiment with every new drug that is mentioned in medical writings should bear in mind this uncertainty as to identity and purity. It is a strong argument to give preference to our old, established drugs, the quality of which can be depended on.

## INDIANA RAISES DUES

The Indiana State Medical Association has raised the state assessment to \$4.00 per annum. Commenting on this action the *Journal* of the Indiana Association says:

The Association has decided to raise the dues to \$4 per year, though it is a great pity that the dues were not made \$5 right in the beginning, for that amount is not more than will be found necessary in the near future to carry out the program planned. Furthermore, it is perfectly ridiculous for any doctor to object to the payment of \$5 per year for the numerous benefits which such an expenditure brings to him. The average doctor's cigar bill is more than that for one week. As a starter though \$4 will accomplish much, and if wisely expended will demonstrate to the membership how much can be accomplished by judicious management.

1. The Work of the American Medical Association Chemical Laboratory, *The Journal A. M. A.*, Nov. 25, 1916, p. 1593.

2. The Unreliability of Unimportant Medicaments, *The Journal A. M. A.*, Sept. 26, 1912, p. 1156.



## AMERICAN SOCIAL HYGIENE ASSOCIATION

The annual meeting and conference of the American Social Hygiene Association was held in St. Louis, Nov. 19-21, 1916, this being the first annual meeting of the National Association to be held west of the Allegheny Mountains. The business sessions were held at the Planters Hotel and public meetings at the Second Baptist Church and Sheldon Memorial Auditorium.

It was significant that physicians, lawyers, educators and publicists joined in a frank and public discussion of a subject which a few years ago would have been shunned. The public meetings were crowded, and eager men and women listened for hours to the addresses and discussions. It was evident that all the speakers agreed that prostitution is not a necessary evil, but that education, public health measures, better living conditions, and the repression of commercialized vice will prevent or reduce it. The policy of segregation was vigorously and unanimously condemned by every speaker. It was remarkable to note the attitude of the press. It was stated that never before at similar conferences or meetings was better and more accurate publicity given than by the St. Louis newspapers, and news dispatches were printed in papers all over the country. There is no doubt that the public conscience is awakening to the dangers of the social evil, and that we are gradually discovering the best ways and means of reducing the evil and venereal diseases. No one phase of the subject was over-emphasized at these meetings, but public education, the training of teachers, the public health measures and law enforcement all had their places. One of the most hopeful signs we have of eventually stamping out this blot on our civilization is the hearty cooperation given by physicians, lawyers, clergymen and all who have to do, or are interested in social welfare and the training of the young.

The public meeting on Monday evening was held at Sheldon Memorial, Jerome D. Greene, secretary of the Rockefeller Foundation, New York City, presiding. The subject of the evening was "Health Aspects of Social Hygiene." Addresses were delivered by Wm. A. Pusey, M.D., of the University of Illinois; Jno. N. Hurty, M.D., secretary of the Indiana State Board of Health, and by Mayzck P. Ravenel, professor of preventive medicine, University of Missouri. While there was some difference of opinion among the various speakers, all agreed that the social hygiene problem is essentially one of morals and sociology and that efforts toward education will be the most likely to curb the social evil.

On Tuesday morning, Mr. Nat Spencer of Kansas City presided, and Mr. J. Lionberger Davis, chairman of the Committee of One Hun-

dred of St. Louis, spoke on "Proposals for Work in Missouri." As a result of this meeting and the discussions which followed, there was formed the Missouri State Social Hygiene Association with a view of coordinating the efforts of the several local societies in Missouri and establishing societies where there are none at present. Mr. J. Lionberger Davis was elected president; Dr. Frances L. Bishop, treasurer, and Dr. H. E. Kleinschmidt, secretary. It is hoped that this new Missouri society with the assistance of the American Social Hygiene Association will be able to employ an experienced executive secretary to carry on the work intensively in Missouri.

The subject of the public meeting on Tuesday afternoon was "Ways and Means of Public Education Regarding Social Hygiene," Donald R. Hooker, M.D., of Baltimore, presiding. "The Contribution of Women's Clubs to the Social Hygiene Movement" was the subject of a paper by Mrs. Flora Hartley Greene. Thomas W. Galloway, Ph.D., professor of biology of Beloit College, discussed "Health as a Moral Issue," and Dr. Wm. F. Snow, general secretary of the American Social Hygiene Association, gave an interesting talk and demonstration on "Public Education Through Social and Philanthropic Institutions." The discussion which followed was brisk and enlightening and showed a keen interest in the constructive side of public education in matters of sex.

The last meeting was held at Sheldon Memorial and was devoted to a discussion of the "Repression of Commercialized Vice." Mr. J. Lionberger Davis presided, and addresses were made by George Cosson, Attorney-General of Iowa, and author of the injunction and abatement law; Samuel P. Thrasher, superintendent of the Committee of Fifteen of Chicago; Robert K. Massie, D.D., chairman of the Vice Committee of Lexington, Ky., and Abram W. Harris, LL.D., president of the National Association.

At the business meeting on the morning of November 20, Chas. W. Eliot, LL.D., was re-elected honorary president; Abram W. Harris, LL.D., president; David Starr Jordan, LL.D., and Bishop Walter T. Sumner were made honorary vice-presidents. Edward A. Alderman, LL.D., of the University of Virginia, and Robert S. Brookings, president of the Washington University Corporation, were elected as active vice-presidents. All other officers were reelected. The first public meeting held at the Second Baptist Church was well attended by the general public. Dr. Geo. R. Dodson, president of the St. Louis Society of Social Hygiene, struck the key-note of the meeting in announcing his subject, viz., "The New Public Conscience," and the main address of the evening was delivered by Wm. A. Evans, M.D., pro-

fessor of sanitary science in the Northwestern University. His subject was "Public Health and Public Morals." His development of the subject was very able and many striking examples from personal knowledge and experience were cited.

## OBITUARY

### JAMES T. WARREN, M.D.

Dr. J. T. Warren of Sprague, a graduate of St. Louis Medical College, 1871, and Jefferson Medical College, 1882, died from arteriosclerosis, Nov. 19, 1916, at the home of his son-in-law, at Minneapolis, Kan., aged 72 years. He was one of the pioneer physicians of Bates County, having located in Old New Home about forty years ago. The body was brought to Foster, Mo., Nov. 21, for interment. For many years he was a member of the Bates County Medical Society.

## MEMBERSHIP CHANGES, DECEMBER

### NEW MEMBERS

L. J. Birsner, Ste. Genevieve.  
F. R. DeHoney, Cornwall.  
Elbert R. King, New Franklin.  
Wilson Murray, Platte City.  
Wm. C. O'Neal, Maywood.  
Edwin H. Roberts, Marshfield.  
Wm. F. Schlicht, Niangua.  
Oda L. Seabaugh, Cape Girardeau.  
E. K. Statler, Sedgewickville.

### CHANGE OF ADDRESSES

W. H. Bailey, Kansas City to Oklahoma City, Okla.  
Horace W. Carle, 2517 Lafayette Ave. to 2802 Mitchell Ave., St. Louis.  
James R. Clemens, Noroton, Conn., to Omaha, Neb.  
Wm. H. Clithero, 6016 Michigan Ave. to 1935 Park Ave., St. Louis.  
Henry J. Cummings, Metropolitan Bldg. to 4545 Lindell Ave., St. Louis.  
Walter J. Elerts, St. Anthony's Hospital to 2861 Union Blvd., St. Louis.  
Edward A. Gummig, 2521 St. Joe Ave. to 2902 Felix St., St. Joseph.  
Ferdinand Haas, 5227a Virginia Ave. to 3765 S. Jefferson Ave., St. Louis.  
John Dawson Hayward, 1385 Belt Ave. to 5796 McPherson Ave., St. Louis.  
C. H. Hecker, St. Louis to El Paso, Tex.  
John C. Kassmeyer, Galena, Ill., to Durand, Ill.

H. E. Kirkpatrick, 6115 Old Manchester to 3603 Humphrey St., St. Louis.

Clarence J. Laws, Princeton to Trenton.

James A. Logan, Fairfield to Warsaw.

D. E. Mackey, 1237 N. Taylor Ave. to R. 1, Clayton.

Ernst Mitchell, Licking to Lamonte.

Oscar L. Peak, Springfield to Topeka, Kans.

S. E. Peden, 1211 N. Grand to 1109 N. Grand, St. Louis.

Otto H. Schwarz, 440 N. Newstead Ave. to 6047 Berlin Ave., St. Louis.

Jas. W. Shankland, 3503 Franklin Ave. to 601 Met. Bldg., St. Louis.

Alma C. Smith, 3524 N. Broadway to City Hospital, St. Louis.

E. F. Weir, Unionville to Lemons.

### TRANSFERRED

W. H. Bailey, Oklahoma City to Oklahoma Co. (Okla.) Society.

Marion Dillon, Elmonte to Los Angeles (Calif.) Society.

### DROPPED

M. C. Alderman, Kansas City.  
Grover P. Alton, Barry.  
Robert C. Atkinson, St. Louis.  
Jewel Bryant, Leora.  
Henry T. Byars, Caruthersville.  
Wm. C. Caldwell, Essex.  
John P. Cavalier, Tyrone.  
John W. Clark, Cross Timbers.  
Edwin R. Curry, Kansas City.  
Arthur N. Curtis, St. Louis.  
W. T. J. Bailey, Cassville.  
Hiram M. Dagg, North Kansas City.  
W. M. Dickerson, Armstrong.  
Wm. L. Diggs, New Madrid.  
Walter D. Dixon, Tuscumbia.  
Talbot S. Duff, Cainesville.  
T. H. Egbert, Kennett.  
Eskew DeWitt, Poplar Bluff.  
Edward E. Evans, Mercer.  
George E. Farr, Leonard.  
R. E. Ferguson, Elmo.  
James J. Fitzgerald, St. Louis.  
Timothy Freeman, Piedmont.  
John F. Gallagher, St. Louis.  
Thos. J. Gibbs, Proctor.  
John E. Gilmer, Piedmont.  
George Gilpin, Stoutsville.  
Frank D. Gorham, St. Louis.  
G. A. Grainger, Caruthersville.  
Spencer C. Graves, St. Louis.  
A. R. Greenlee, Kansas City.  
Wm. C. Guss, Hannibal.  
Henry Hanson, Kirkwood.  
A. S. Harrison, Kennett.  
W. H. Hays, Hannibal.  
Fred J. Hinkly, Stanberry.

Thos. S. Hollenbeck, Portageville.  
 Lewis Hunker, St. Louis.  
 D. J. Hunterson, Ravenwood.  
 Wm. E. Johnson, Belle.  
 Benj. L. Johnston, Manes.  
 Benj. F. Jones, Brownwood.  
 G. A. Jordon, St. Louis.  
 Frank A. Lee, Skidmore.  
 Wm. J. Langan, St. Louis.  
 Charles O. Lewis, Fayette.  
 J. A. Malley, Monroe City.  
 A. W. Mann, Oak Grove.  
 Albert J. Martin, East Prairie.  
 S. P. Martin, East Prairie.  
 Wm. R. Martin, Maplewood.  
 Wm. K. McGee, Moberly.  
 J. L. McGhee, Williamsville.  
 C. S. McGinnis, Sedalia.  
 Sarah E. McIntyre, Branson.  
 Robert McReynolds, Knox City.  
 H. L. Meador, Garwood.  
 S. E. Mitchell, Malden.  
 Chas. V. Mosby, St. Louis.  
 Vincent J. Mueller, St. Louis.  
 Frederick H. Nies, St. Louis.  
 Leon B. Northcutt, Washburn.  
 Charles O'Farrell, Canton.  
 Oscar S. Overton, Corsicana.  
 Harry W. Oyler, Mill Grove.  
 K. Papacharalambos, Greece.  
 Richard J. Payne, St. Louis.  
 Donnell M. Pearson, Louisiana.  
 Isom H. Phipps, Holland.  
 C. G. Pinckard, Kansas City.  
 M. M. Pollard, Barnard.  
 George W. H. Presnell, Sikeston.  
 Jas. B. Prichard, St. Louis.  
 Paul L. Pritchett, Webb City.  
 J. W. Rhodes, Point Pleasant.  
 Katherine B. Richardson, Kansas City.  
 James E. Roy, Clarence.  
 Clive D. Scott, St. Louis.  
 John P. Sebastian, Williamsville.  
 Silas M. Sanford, Palmyra.  
 Joseph F. Snedec, St. Louis.  
 Arthur F. Sternfels, St. Louis.  
 Chas. V. Steward, Elkton.  
 C. B. Taylor, Carthage.  
 W. S. Thompson, Armstrong.  
 Luther H. Wallen, Summersville.  
 Arthur E. Walter, Webster Groves.  
 W. J. Wheat, Barnett.  
 Chas. A. White, St. Louis.  
 Richard M. Winn, Hannibal.

## DECEASED

John Ford, Williamstown.  
 David R. Porter, Kansas City.

## MISCELLANY

NEW OPTOMETRY BILL TO BE  
 INTRODUCED IN THE 1917  
 GENERAL ASSEMBLY

An Act to regulate the practice of optometry and fixing penalties for the violation thereof.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Section 1. That the practice of optometry is defined to be the employment of any means other than the use of drugs, medicine, or by surgery for the measurement of the power of vision and the adaptation of lenses for the aid thereof.

Sec. 2. The provisions of this act shall not be construed to apply to physicians duly licensed to practice medicine under the laws of the State, nor to persons who sell spectacles or eyeglasses on prescription from any duly qualified optometrist registered under this act or from any licensed physician, nor to dealers in spectacles or eyeglasses having an established place of business who neither practice nor profess to practice optometry, nor to the exclusively wholesale business of any dealer, or manufacturer.

Sec. 3. The Governor, with the advice and consent of the Senate, shall appoint five persons from among such practicing optometrists of the State as have had not less than five years' practical experience in optometry as defined in section one of this act, who shall constitute the State Board of Optometry. No member of any optical school or college, or instructor in optometry, or person connected in any way therewith, or any manufacturer, jobber or jobbing representative, shall be eligible to appointment upon the State Board of Optometry. On or before the first day of July, 1917, the Governor shall appoint members of said board, and the terms of office of the members of the said board first appointed shall be as follows: Beginning July 1, 1917, one member shall be appointed for a term of one year, one for two years, one for three years, one for four years, and one for five years. The term of the members of said board successively, shall expire on the 30th day of June of each year and the terms of all members after the first board is appointed shall be for a period of five years and until their successors shall be appointed and qualified. If any person so appointed shall discontinue the active practice of optometry during the period of his appointment his term shall thereupon cease and he shall be at once removed by the Governor. All vacancies, however occurring, shall be filled by appointment by the Governor, with the advice and consent of the Senate, and appointments made when the Senate is not in session shall be confirmed at its next ensuing session.

Sec. 4. The members of the State Board of Optometry, before entering upon the discharge of their duties, shall make and file with the Secretary of State the constitutional oath of office. The members of said board shall within thirty (30) days after appointment, and annually thereafter in the month of July, meet and organize by electing a president from among the members thereof, and a secretary who shall also be the treasurer of said board, who shall not be a member of said board, but who shall have all of the qualifications of a member. The said secretary and treasurer, before entering upon his duties, shall file a bond with the Secretary of State in the penal sum of \$5,000, payable to the State of Missouri, to insure the faithful discharge of his duties in said office. The said board shall prescribe the duties of its officers and adopt rules and regulations, not inconsistent with this



act, to govern its proceedings; and also shall adopt a seal; and the secretary shall have the care and custody thereof, and he shall keep the record of all the proceedings of said board, which shall be open at all times to public scrutiny. All certificates issued by the State Board of Optometry shall be signed by the president and attested by the secretary with the seal of said board attached to or impressed thereon. Every such certificate shall be prima facie evidence of the right of the holder to practice optometry. The president and secretary shall have power to administer oaths and the board to take testimony in all matters relating to its powers and duties, and for that purpose shall be able to compel the attendance of witnesses and the production of all necessary books, papers, or documents, upon the proper service of a subpoena in proper form, duly attested. If any person is subpoenaed to appear before the said board and fails to obey the command of said subpoena without reasonable cause, or if any person in attendance upon any hearing or proceeding before said board shall, without reasonable cause, refuse to be sworn or to be examined or to answer a question or to produce a book or paper, he shall be deemed guilty of a misdemeanor and on conviction thereof shall be punished by a fine of not less than \$50 nor more than \$500, or by imprisonment in the county jail for not less than one week nor more than one year, or by both such fine and imprisonment, and may be prosecuted therefor in any court of competent jurisdiction, and in case of a continuing violation, each day's continuance thereof shall be deemed to be a separate and distinct offense.

Sec. 5. It shall be the duty of the board to examine all applications for registration submitted in proper form; to grant certificates of registration to such persons as may be entitled to the same under the provisions of this act; to cause the prosecution of all persons violating its provisions; to report annually to the Governor the condition of optometry in the State of Missouri, which said report shall also furnish a record of the proceedings of the board for the year and an itemized statement of all moneys received and disbursed, with the names of all optometrists registered under this act, and shall contain a copy of all rules adopted by said board of optometry; and to do all other things necessary to carry out the provisions of this act.

Sec. 6. The board shall have the power to make by-laws for the proper fulfillment of its duties under this act and shall keep a book of registration in which shall be entered the names and places of practice or business of all persons registered under this act, which books shall also specify such facts as said persons shall claim to justify their registration. The president of the board may call a special meeting at any time. Three members shall constitute a quorum and the records of the board shall at all times be open to public inspection.

Sec. 7. The board shall hold meetings for the examination of applicants for registration and the transaction of such other business as shall pertain to its duties at least once in three months. One of which meetings in every year shall be held in the city of St. Louis and one in Kansas City; it shall give thirty (30) days' public notice of the time and place of all such meetings.

Sec. 8. The secretary of said board shall receive a salary which shall be fixed by the board, but which shall not exceed the sum of \$1,500 per annum, payable monthly out of the State treasury. Each member of the board shall receive as compensation for his services, the sum of \$7 for each day engaged in this service and all legitimate and necessary expense incur-

red in attending the meetings of the board, payable out of the State treasury on the warrant of the Auditor, said warrant to be based upon vouchers certified to as correct by the president and secretary of the said board.

All moneys payable under this act shall be paid to the secretary, who shall pay them to the State Treasurer monthly.

Sec. 9. Any person who shall within six months after this act takes effect forward to the State Board of Optometry an application for registration accompanied by satisfactory proof that he was continuously engaged in the practice of optometry at an established place of business or practice for three years next preceding the date this act takes effect, shall, upon the payment of a fee of \$5, be granted a certificate of registration as a registered optometrist without examination. Provided, that in case of failure or neglect to register within the six months' time limit as herein provided, such person shall be deemed to have waived his right to registration under this section, and in order to be registered shall comply with the requirements for registration by examination.

Sec. 10. Any person of good moral character, temperate habits and not less than 21 years of age, who shall present satisfactory evidence to the State Board of Optometry that he has studied not less than two years in the office of a registered optometrist or that he has graduated from a school of optometry maintaining a standard satisfactory to the board, shall be entitled to an examination before said board for a certificate of registration upon making application, in such manner and form as shall be prescribed by the board, accompanied by the fee hereinafter specified. If the said examination shall be satisfactory to the board as to the qualifications of the applicant for the practice of optometry he shall be granted a certificate of registration by examination.

Sec. 11. Every such applicant for registration by examination shall pay to the secretary of the board at the time of filing his application a fee of \$10, which fee, if he pass the examination, shall also entitle him to a certificate, and which fee, should he fail in his first examination, shall entitle him to a second examination if taken within one year. Should the second examination be satisfactory, he shall, before a certificate is granted, pay an additional fee of \$5.

Sec. 12. The said board may, in its discretion, upon payment of a fee of \$5, grant certificates of registration to the licentiates by examination of such other boards as shall prescribe similar recognition of its licentiates.

Sec. 13. Every person to whom a certificate of registration is granted under this act shall display the same in a conspicuous place in his principal office, place of business or employment. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor and on conviction thereof shall be fined fifty (\$50) dollars.

Sec. 14. The State Board of Optometry may refuse to grant a certificate of registration to any person guilty of felony, gross immorality or malpractice, or who has an infectious or contagious disease, or is a victim of the use of alcoholic liquors or narcotic drugs to such an extent as to render him unfit for the practice of optometry; and the said board may, after due notice and hearing, revoke or suspend any certificate for like cause or any certificate procured by misrepresentation or fraud.

Sec. 15. Every registered optometrist who desires to continue the practice of optometry shall annually on or before the first day of January, pay to the

secretary of the board a renewal registration fee of \$2 per annum, for which he shall receive a renewal of his certificate.

In case of neglect to pay the renewal registration fee herein specified, the board may revoke such certificate and the holder thereof may be reinstated only by complying with the conditions specified in this act for the registration of unregistered persons. But no certificate or permit shall be revoked without giving sixty days' notice to the delinquent who, within such period, shall have the right of renewal of such certificate on payment of the renewal fee with a penalty of \$5; Provided, that retirement from practice for a period not exceeding five years shall not deprive the holder of said certificate of the right to renew his certificate on the payment of all lapsed fees.

Sec. 16. Every renewal certificate issued by the State Board of Optometry under this act shall expire each year on the 31st day of December following the issuance of the same.

Sec. 17. It shall be unlawful on and after six months from the date that this act takes effect, for any person to practice, or to profess or advertise to practice, optometry, or to test and examine eyes and recommend glasses therefor, without a certificate from the State Board of Optometry as hereinbefore provided. Any person who shall violate any provision of this section shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not less than \$25 nor more than \$100 for every such offense.

Sec. 18. It shall be unlawful for any person, not a registered optometrist, to open or conduct a store, shop, office, or other place of business, where eyes are tested and spectacles or eyeglasses are recommended, and sold, unless such person shall employ and place in active and personal charge thereof a registered optometrist.

It shall be unlawful for the proprietor of any store, shop, office, or place of business, as aforesaid, to allow any person in his employ to examine and test the eyes of another and to recommend glasses therefor unless such person shall be a registered optometrist.

Any person violating any provisions of this section shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than \$25 nor more than \$100 for every such offense.

Sec. 19. Every person registered under this act shall cause his original certificate or permit to be registered with the county clerk of each and every county in which he shall practice, and the date of registration shall be endorsed thereon, and in the city of St. Louis the same shall be registered with the license collector. And whenever practicing said profession of optometry outside of, or away from, his principal office or place of business, he shall deliver to each customer or person he shall fit with glasses a bill of purchase bearing the date thereof, which shall contain his signature, home postoffice address and the number of his certificate of registration. The county clerk or license collector may charge a registration fee not exceeding 25 cents for every such certificate. For failure or neglect by the holder to register any certificate as provided in this section, the State Board of Optometry may revoke the same, subject to reinstatement only on payment to the said board of a penalty of not less than \$25 nor more than \$100.

Sec. 20. All suits for the recovery of the penalties prescribed in this act shall be prosecuted in the name of the State of Missouri in any court having jurisdiction and it shall be the duty of the prosecuting attorney of the county where such offense is committed to prosecute all persons violating the provisions of this act upon proper complaint being made.

## THE WORKMEN'S COMPENSATION LAW AS IT AFFECTS THE PHYSICIAN

There can be no better way to bring home to the local profession the great necessity for an active participation in the developing of this law than the reproduction of the arguments and discussion met in other states.

Mr. Paul N. Furman, Chief, Bureau of Statistics, Department of Labor and Industry, addressing a conference of physicians of the Pennsylvania Department of Labor and Industry said in part:

"I am explaining the provisions of the law as they affect the medical profession; not to amend it or to apologize for it. The fact that this legislation was being considered by the last legislature was known to every citizen of the state. The employers did not overlook the fact and they saw to it that they were well represented not only before the commission that had been working on this law for several years, but also before the committees that considered the legislation primarily before it was reported out, and its terms were thoroughly discussed by them with each member of the legislature. Therefore the legislators had the advantage of the employer's viewpoint. The same observations are particularly true as to representatives of labor. If the medical men feel that the Pennsylvania act is somewhat restrictive on their profession it might be well for them to remember that probably they did not take the same care of their interests that the employer and the employee did, at a time when their advice would have been very welcome and most instructive.

"That section of the act which probably has excited the most interest and comment on the part of the medical profession is Section 306 which reads: 'During the first fourteen days after disability begins the employer shall furnish reasonable surgical, medical and hospital services, medicines and supplies, as and when needed, unless the employee refuses to allow them to be furnished by the employer. The cost of such services, medicines and supplies shall not exceed \$25, unless a major surgical operation shall be necessary; in which case the cost shall not exceed \$75. If the employer shall, on application made to him, refuse to furnish such services, medicines, and supplies, the employee may procure the same, and shall receive from the employer the reasonable cost thereof within the above limitations. If the employee shall refuse reasonable surgical, medical and hospital services, medicines and supplies, tendered to him by his employer, he shall forfeit all right to compensation for an injury or any increase in his incapacity shown to have resulted from such refusal.'

"The following two provisions seem to have been universally adopted throughout all the states:

"1. The right of the employer to select medical attendants.

"2. Having a waiting period of from ten to fifteen days during which time the employer furnishes medical attendance and becomes responsible for a certain amount as provided by the act, varying in different states, but during which period the employee receives no compensation. It is perfectly evident that this period of waiting is a very wise and necessary precaution as that is the testing period and insures the employer against the malingering. The right of the employer to select the physician is fundamentally right. It may be criticized from the viewpoint of the medical profession alone as restrictive on the free choice of individual doctors. It may cause a few medical men to indulge in caustic criticism of the act. It may create in the medical profession, specialists who will be selected by employers and insurance companies to treat these cases; nevertheless from the standpoint of the public, whose interests are only to return quickly a productive element of society



to activity, it will work out to the economic advantage of industry, for the reason that will readily occur to any one, that with the right to select physicians to attend the injured man during the waiting period of two weeks, the commercialism of the employer will dictate to him the thought of securing the best medical attendance so as to return that man to his employment before the expiration of the two weeks' period in order to avoid liability of compensation which begins on the fifteenth day after the accident.

"Question 1. Does the amount allowed for the first fourteen days (namely \$25, or in case of surgical operation \$75), go to the hospital or to the attending physician or surgeon?"

"Answer 1. The act allows no amount for the first fourteen days of service. It obliges the employer to give the services, but the employer is free to make what arrangement he pleases for the rendering of these services to his injured employee.

"Therefore, a hospital or physician who gives such services at the employee's request during the first fourteen days, would not have any right to recover the same against the employer. If the employer refuses on request to give the employee medical attention, the employee is free to employ his own physician and the employer is bound under the act to reimburse the employee for the sum spent by the employee for medical services. But, here again, the physician's claim would be against the employee. He has no status as a claimant under the terms of the Compensation Act, nor does the act provide any lien for these services on the amount recovered by the employee. Therefore, I should answer your first question by saying that this would depend entirely on the arrangement between the hospital and the employer, and on the arrangement between the hospital and its physician.

"Question 2. Are corporations liable for any hospital care, or is the injured employee individually liable?"

"Answer 2. The liability of a corporation is the same as the liability of an individual employer. My answer to the second question is therefore the same as my answer to the first.

"Question 3. In case of an employee so seriously injured that he must remain in the hospital for more than two weeks, who is liable for payment of hospital bills, also who is liable for the bills for surgical attention?"

"Answer 3. In such cases the employee would be liable unless the employer chooses to make an arrangement for a longer treatment than two weeks, at his, the employer's expense. In many cases, insurance companies and individual employers are glad to make such arrangement in order that by proper treatment an injured employee shall be speedily cured, so as to shorten his period of disability.

"Question 4. Is an injured employee permitted, to give an order on the employer to have hospital bills and surgeons' bills deducted from the amount due him under the Compensation Law?"

"Answer 4. It is especially provided that such claims for payments due under this article shall not be assignable, and therefore, an order for the employer to have a hospital's share deducted from all compensation due, would in all probability be void.

"Question 5. If the employee is not permitted to give such an order and he or his friends cannot pay the hospital, how is the hospital to obtain payment of its bill? Must the hospital authorities swear out an order of relief and have the bill paid by overseers of the poor, or whoever handles the poor fund of the city, borough or county?"

"Answer 5. The hospital must obtain payment of its bill from the employee exactly as it would from any other man whose financial position was uncertain.

"Question 6. How are the bills of the surgeon provided for? Must he obtain his pay from the employee, or from the employer?"

"Answer 6. The bills of a surgeon are provided for exactly in the same way, no more nor less than the bills of the physician or the hospital. The surgeon must make his arrangement with the physician or hospital or the employer; otherwise, he must trust to recover the value of his services from the employee, as he would recover them before the act went into effect.

"Therefore it is plain to the physician who is called on to attend a case whether or not it is one that will come within the terms of compensation and, when properly commissioned, whether or not he must abide by the terms of this act as to fees."

We regret that space will not permit the publication in full of the proceedings of this Conference. The October issue of *The Pennsylvania Medical Journal*, Athens, Pa., is devoted almost entirely to this and one other conference of industrial physicians.

You will be well repaid for your efforts in securing a copy from the editor.—*Bulletin* St. Louis Medical Society.

#### SECTIONS IN WORKMEN'S COMPENSATION ACT AFFECTING MEDICAL ADVISERS AND THEIR FEES

Section 13. (a) In addition to all other compensation, the employer shall furnish the employee such medical, surgical and hospital treatment, including nursing, medicines, medical and surgical supplies, crutches, apparatus and artificial parts, as may be reasonably required for the first eight weeks after the injury, not exceeding the amount of two hundred dollars, to cure and relieve from the effects of the injury, and if the employer shall neglect or refuse seasonably to do so, he shall be liable for the reasonable expenses incurred by or on behalf of the employee in providing the same. As soon as an employer knows of an injury to his employee, he shall immediately furnish such requirements, and on his failure to offer or furnish the same, he shall be deemed to have neglected or refused to do so. In exceptional cases the commission may extend both of said limits to such time and amount as may reasonably be necessary. Where such requirements are furnished by a public hospital or other institution, payment therefor shall be made to the proper authorities.

(b) If it be shown to the commission that the employer is furnishing such requirements in such manner that there is reasonable ground for believing that the life, health, or recovery of the employee is endangered thereby, the commission may order a change in the physician, hospital or other requirement, and if the employer fail to comply promptly with such order, may permit the employee or someone for him to provide the same under such regulations as may be provided by the commission.

(c) All fees and charges under this section shall be fair and reasonable, shall be subject to regulation by the commission, and shall be limited to such as are fair and reasonable for similar treatment of injured persons of a like standard of living. The commission shall also have jurisdiction to hear and determine all disputes as to such charges.

(d) No compensation shall be payable for the death or disability of an employee, if and in so far as the same may be caused, continued or aggravated by an unreasonable refusal to submit to any medical or surgical treatment or operation, the risk of which is, in the opinion of the commission, inconsiderable in view of the seriousness of the injury.

(e) The testimony of any physician who treated the employee shall be admissible in evidence in any proceedings for compensation under this act.



(f) Every hospital or other person furnishing the employee with medical aid shall permit its records to be copied by and shall furnish full information to the commission, the employer, the employee or his dependents and any other party to any proceedings for compensation under this act, and certified copies of such records shall be admissible in evidence in any such proceedings. \* \* \*

Section 47. (a) After an employee has received an injury he shall from time to time thereafter during disability submit to reasonable medical examination at the request of the employer, his insurer, the commission or any of its commissioners, referees or arbitrators, the time and place of which shall be fixed with due regard to the convenience of the employee and his physical condition and ability to attend. The employee may have his own physician present, and if the employee refuses to submit to such examination, or in any way obstructs the same, his right to compensation shall be suspended and may be forfeited during such period.

(b) The commission or any of the commissioners, or referees, may appoint a duly qualified impartial physician to examine the injured employee and to report, his fees and traveling expenses for which shall be fixed and allowed by the commission and paid as other costs under this act. If all the parties shall have had reasonable access thereto, the report of such physician shall be admissible in evidence.

(c) The testimony of any physician who examined the employee shall be admissible in evidence in any proceeding for compensation under this act.

(d) Certified copies of the proceedings before any coroner holding an inquest over the body of any employee receiving an injury in the course of his employment resulting in death, shall be admissible in evidence in any proceedings for compensation under this act, and it shall be the duty of the coroner to give notice of such inquest to the employer and the dependents of the deceased employee. \* \* \*

Section 50. The commission, or any commissioner, referee or arbitrator shall have power to issue process, subpoena witnesses, administer oaths, examine books and papers, and require the production thereof, and to cause the deposition of any witness to be taken and the costs thereof paid as other costs under this act. But no deposition shall be taken unless it appear at the hearing that the testimony of the witness is necessary to establish facts on which there is not otherwise sufficient evidence. Any party shall be entitled to process to compel the attendance of witnesses and the production of books and papers, and at his own cost to take and use depositions in like manner as in civil cases in the circuit court. Subpoenae shall extend to all parts of the state, and may be served as in civil actions in the circuit court, but no costs shall be allowed for such service. Each witness shall receive the fees and mileage prescribed by law in civil cases, but the same shall not be allowed as costs unless the persons before whom the hearing is had shall certify that the testimony of such witness was necessary. All costs under this act shall be approved by the commission and paid out of the state treasury as other claims against the state. \* \* \*

Section 60. The commission may appoint or employ during its pleasure and prescribe the duties and fix the salaries of a medical adviser, secretary, and such other appointees or employees as it may deem necessary to carry out the provisions of this act. The commission may also appoint during its pleasure and fix the salaries and expenses of not exceeding five general referees who shall maintain offices and hold hearings in such places as may be designated by the commission and shall devote all of their time to the performance of such duties as may be imposed on them by the commission. The commission may also appoint a special referee to hear any case.

## SEXUAL HYGIENE MALFEASANCE

Under this caption Dr. M. L. Heidingsfeld of Cincinnati writes interestingly (*Ohio State Medical Journal*) of the good influence noticeable on the lay public since open discussion of sexual hygiene has become somewhat general. He reminds us that education on this topic has been very effective by inculcating a wholesome fear of venereal diseases, particularly of syphilis and gonorrhea, in the minds of the people and that this fear has not only reduced the spread of venereal diseases but has had considerable influence in restraining sexual immorality. Another influence of this educational campaign is its effect on persons contemplating marriage by encouraging them to obtain certificates of health. He then describes a condition that will shock every honest physician and arouse the fighting spirit in the profession to protect innocent persons from careless and unscrupulous doctors. We quote:

"The good which will result from such a custom (pre-marital examinations) is self-evident and requires no comment. It should find general endorsement at the hands of every member of the profession as well as the public at large. *Any individual who would oppose such a measure or who would commit a single act to make such a procedure undesirable or ineffective, is worthy of the severest condemnation.*"

An instance of that character has recently come to the writer's personal notice. On July 21, 1916, Dr. Guy Eckman referred Mrs. E. B., aged 33 years, to his attention. The young woman had held a semi-public position in a large Cincinnati hostelry. Her personal knowledge of sexual diseases was far above the average, gleaned, as she stated, from carefully selected reading, public lectures and the playhouse. Her fear in that direction was almost paramount to a paranoia. On personal examination she had a well-defined infection of syphilis of about two to three months' duration, in the form of fading initial lesion of the labia major dextrum, marked adenopathy of the inguinal glands and well-defined roseola covering the entire body. She stated that the marital act was consummated just three months previously. Before matrimony was countenanced she required a certificate of good health which the individual produced from a practitioner of good standing who enjoys the esteem of the entire public. This certificate was shown to Dr. Eckman and placed in his personal possession. When the patient was apprised of her condition by Dr. Eckman and myself she virtually collapsed. Her mental prostration was in fact pitiable. Her loss of faith not only in a profession which should always have held her confidence and esteem, but also in its higher and more esthetic inculcations and teachings, was sad to contemplate.

If this woman's statements were in any degree acceptable, and from all appearances they were unquestionably so, the certificate of good health from the physician in question was not worth the paper it was written on. Her first impulse was to place the matter in the hands of her attorney for a suit of personal damages. The only deterrent motive was the resulting disgrace in the eyes of her family and her friends.

Acts of this character should not go unchallenged. The entire medical profession and the world at large is sparing no degree of time, expense and trouble in seeking the betterment of conditions in this direction. Any member of the profession who is delinquent in this direction should receive a merited degree of punishment and a physician who would essay to give a certificate of good health under the circumstances, without a proper and careful examination, is not worthy of the privilege to practice medicine. This statement can be made without reservation, inasmuch as such an examination can be made at this day, without equivocation relative to the fitness of the contracting parties.

## SOME DOCTORS ENEMIES OF PROGRESS

An Editorial by Arthur Brisbane

The World's Highest Salaried Editorial Writer.

The most useful, unselfish servant of the public is the competent, skillful, broad-minded doctor.

He gives his time, energy and often his life, to the diseases of others—an unpleasant business.

If he makes a discovery that in selfish hands might mean a fortune, he gives it to the world free.

On the other hand, there is no more dangerous enemy of progress, and particularly of medical progress, than the self-satisfied, ignorant physician, whose mind, if it ever thought, stopped thinking on the day he got his diploma and his license to sell pills and peddle solemn, meaningless talk.

When Harvey announced the circulation of the blood, the "great and learned physicians" laughed at him, declared that the blood is in the body like the juice in an orange—and they went on with their "bloodletting" first on one side and then on the other, to keep the juice evenly distributed.

When Pasteur was announcing one after another of his great discoveries, refuting the stupid theory of spontaneous generation, proving that disease, decay, suppuration, etc., were not caused by "breaking down of tissues," but by specific, hostile germs or bacteria, the doctors denounced him and advised him to "stick to his chemistry and things that he was able to understand."

At that very moment he was giving to the whole world of medicine the knowledge on which it has lived and on which it has worked ever since.

When one of Pasteur's colleagues announced that tuberculosis was caused by a certain, definite germ, and by nothing else, and that the destruction of that germ would mean the destruction of tuberculosis, he was called in polite terms a scientific idiot.

A great medical authority of France, with his blue coat and his gold buttons, sneeringly said: "Then all we need do is spread nets for the tuberculosis germ, and the thing is ended."

When Nathan Straus began his work, based on the discoveries of Pasteur, a work that has spread over the whole world, and saved the lives of hundreds of thousands of children, it was the ignorant doctors that opposed him. And not a few of them oppose him still, some because they are simply ignorant, others for reasons not quite so creditable, perhaps.

Now comes Dr. Carrel, the great French surgeon, to announce a new system of treating wounds that does away with 50 per cent. of the amputations, saves lives and avoids removal of bones and muscles.

The superficial wound, ever since the day of Lister, has been thoroughly cleaned and made and kept "aseptic," free from poisonous germ matter. The deep, rough, lacerated wound hitherto has been inaccessible to such treatment.

Dr. Carrel now irrigates the wound in all of its deepest recesses with a disinfecting fluid. It kills the poison, washes out the foreign matter, closes up the wound, and the patient recovers.

Quite as a matter of course, Dr. Carrel mentions the fact that the use of this new idea has been much delayed because "the lights of the medical profession" have steadily opposed it, fought it and prevented it.

We have those with authority to confer degrees and diplomas on doctors, giving them authority to practice on human flesh and blood.

We should have another body of well-informed, up-to-date men, sitting perpetually, hearing complaints. Authorize them to take away from narrow-minded or ignorant or out-of-date physicians the right to practice.—*St. Louis Star*.

## SOCIETY PROCEEDINGS

## COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.

Webster County Medical Society, Dec. 6, 1916.

Platte County Medical Society, Dec. 8, 1916.

Cape Girardeau County Medical Society, Dec. 15, 1916.

Livingston County Medical Society, Dec. 16, 1916.

Madison County Medical Society, Dec. 17, 1916.

Carter-Shannon County Medical Society, Dec. 20, 1916.

## ST. LOUIS MEDICAL SOCIETY

## Meeting of the General Society, Nov. 18, 1916

The meeting convened at 8:35 p. m., Dr. L. C. Boisliniere presiding. The minutes of November 11 were read and approved.

The scientific program consisted of the following: "Should the Asymptomatic Individual with a Positive Wassermann Be Treated?"

Proposition, by Dr. Martin F. Engman.

Discussion opened by Dr. William A. Pusey of Chicago. Discussion continued by Drs. Malcolm A. Bliss, William Edler, Frank Fry, W. W. Graves, Joseph Grindon, Philip C. Jeans, W. H. Mook, C. H. Neilson, L. H. Behrens, Amand Ravold, W. H. Stauffer, J. Ellis Jennings, Robert M. Funkhouser, Dr. Rowley, Medical Director of the Phoenix Mutual Life Insurance Co. of Hartford, Conn., Jacob Jacobson, Floyd Stewart, E. Lee Myers, Martin Van Raalte, Hudson Talbott; Drs. Engman and Pusey closing.

On motion the by-laws were suspended and Dr. William A. Pusey was unanimously elected an honorary member and extended a vote of thanks.

Attendance 284.

## Meeting of Nov. 25, 1916

The meeting was called to order at 8:45 p. m., by the president, Dr. L. C. Boisliniere.

The scientific program consisted of a clinical evening.

Exhibition of Case of Anemia by Dr. Alphonse J. Raemdonck (microscopical specimens shown). Report of Two Cases of Symmetrical Lipomatosis and Dercum's Disease by Dr. Charles E. Hyndman (illustrated with lantern slides). Report of Cases of Esophageal Structure in Child and Kidney Stone by Dr. Edward H. Kessler (illustrated with lantern slides). Demonstration of Suture of Umbilical Cord at Birth by Dickinson's Method by Dr. Fred J. Taussig (demonstrated on cadaver). Report of Case of Nystagmus by Dr. Max W. Jacobs.

Discussion of nystagmus by Drs. James Moores Ball, E. Lee Myers and David S. Booth; Dr. Jacobs closing.

The secretary reported on the Physician's Business Bureau. It was moved that the report be received and made a special order of business at a future meeting. The president read the result of the election of officers for 1917 as follows: President, Albert H. Hamel; first vice president, Malcolm A. Bliss; second vice president, William Kerwin; secretary, J. Albert Seabold; councilors, Robert M. Funkhouser, Wenzel C. Gayler, Louis C. Boisliniere, Charles S. Rehfeldt; delegates, Cyrus E. Burford, Albert F. Koetter, Robert M. Funkhouser, Charles E. Hyndman, William H. Mook, Rudolph S. Vitt, William Kerwin, Francis Reder, John C. Morfit.

Attendance 148.



### Meeting of Dec. 2, 1916

The meeting was called to order at 8:40 p. m., Dr. L. C. Boisliniere presiding. The minutes of November 25 were read and approved.

The scientific program consisted of the following:

A paper on the "Serological Examination of Two Hundred Children of Outdoor School," by Dr. Charles D. Johnson. Discussion by Drs. James Stewart, John Zahorsky, Borden S. Veeder, Jacob J. Singer, Joseph Grindon, William Weiss, Thomas A. Hopkins, and Moyer S. Fleisher; Dr. Johnson closing.

Dr. Louis H. Hempelman read a paper on "Trichiniasis with Report of Three Sporadic Cases," illustrated with microscopical sections.

The president read a letter from the St. Louis Surgical Society inviting the society to attend its meeting on Wednesday, December 13.

A letter from Dr. M. J. White, Medical Director of the St. Louis Tuberculosis Society, regarding Medical Examination Day on December 6 was read and filed.

The chair announced a gift of a bust of Esculapius and a number of books from the heirs of Dr. Charles H. Klie.

Dr. Bliss reported on some phases of the Workmen's Compensation and Mutual Insurance Bills.

On motion the editor was instructed to publish the sections of the Workmen's Compensation Bill as designated by Dr. Bliss, in the next two issues of the Bulletin.

On motion the consideration of the Workmen's Compensation Bill together with the Physician's Business Bureau was made a special order of business for the evening of December 16, the entire evening to be set aside for this purpose.

Attendance 132.

### Meeting of the General Society, Dec. 9, 1916

The meeting convened at 8:40 p. m., the president, Dr. L. C. Boisliniere, in the chair. The minutes of December 2 were read and approved.

The scientific program, provided by the Barnard Free Skin and Cancer Hospital, consisted of the following:

Demonstration of Cases, Dr. Roland F. Fisher: hemangioma of face; cancer of nose with plastic operation; multiple ulcerated lesions over face with postoperative result of excision and Roentgen-ray treatment; extensive lesion of lower eyelid (cancer).

Demonstration of Cases of Cancer with Post-operative results, Dr. William E. Leighton: ulceration in mouth involving cheek and upper jaw (removal of upper jaw and Roentgen-ray treatment); ulcerating mass involving left cheek and protruding from both nostrils; cancer involving left side of lower jaw (bone involved); cancer in region of pylorus (resection of pylorus and posterior gastro-enterostomy) and radiograph taken two years later; carcinoma involving rectum (lower 3 inches) (two years elapsed since operation).

Demonstration of Cases, Dr. Aloys S. Heithaus: severe potassium iodid eruption; case of lymphangioma tuberosum multiplex; general toxic dermatitis.

Demonstration of Cases, Dr. William Mook: severe blastomycosis of face.

Lantern Slide Illustration, Dr. Martin F. Engman: amebic ulcer of skin with case histories; extragenital chancres.

Report of Case of Hematometra and Hematocolpus in a Woman 74 Years, with Demonstration of Specimen, Dr. George Gellhorn.

Remarks on Methods and Results in Educational Campaign for Control of Cancer, Dr. Fred J. Taussig.

Remarks on Cancer, Dr. Norman B. Carson.

General discussion by Drs. Joseph Grindon and William H. Stauffer.

On motion a vote of thanks was extended to the Barnard Free Skin and Cancer Hospital and staff for the excellent program.

Dr. Boisliniere announced that the evening of Saturday, December 16, would be set aside for the consideration of the Workmen's Compensation Law and the Physician's Business Bureau.

Attendance 218.

### APPLICANTS FOR MEMBERSHIP

Any member of the society who knows a good or sufficient reason why anyone of the following applicants is not eligible for membership in our society is requested to communicate at once with the Membership Committee.

Erwin Rudolph Schmidt, Barnes Hospital. Sponsors: G. Canby Robinson, Sidney I. Schwab.

Fred F. Perrings, Third National Bank Building. Sponsors: A. F. Koetter, Robert E. Wilson.

Giuseppe M. Pellettieri, 1330 Franklin Avenue. Sponsors: W. Larimore, W. U. Kennedy.

Hilary D. Meyer, 3551 Olive Street. Sponsors: A. R. Kieffer, E. D. Edwards.

### TENTATIVE PROGRAM

Saturday, Jan. 6, 1917.—Annual meeting.

Saturday, Jan. 13, 1917.—Ocular Tuberculosis and Associated Inflammatory Conditions of Upper Respiratory Tract, Drs. Frederick O. Schwartz and Monte M. Meyers.

Saturday, Jan. 20, 1917.—Eczema, Dr. Richard S. Weiss.

Saturday, Jan. 27, 1917.—Symposium on Early Tuberculosis. 1. Relation of Tuberculosis Infection to Clinical Tuberculosis, Dr. Eugene L. Opie. 2. Treatment, Dr. Albert Taussig. 3. Relation of the Community to Tuberculosis, Dr. Cleveland H. Shutt. 4. Relation of Physical Signs to Roentgen Ray, Dr. Jacob J. Singer. 5. Symptoms of Early Tuberculosis, Dr. Louis C. Boisliniere.

Saturday, Feb. 3, 1917.—Intra-Abdominal Hernia, Dr. Fred W. Bailey.

J. ALBERT SEABOLD, M.D., Secretary.

### THE SURGEONS CLUB OF ST. LOUIS

April 19, 1916

#### PRESENTATION OF CASE OF EPILEPSY.—

By DR. E. SACHS.

The history of this patient is that about one year ago he had attacks of jacksonian epilepsy beginning in his right hand. Several years before he had been seen by Dr. Seelig, who on the strength of the typical jacksonian convulsions and the history of an injury to the left parietal region removed a piece of bone. The patient was completely relieved for about ten years and then began to have right-sided convulsions beginning in his right hand, which showed a tendency to become more frequent.

When he came in we had not seen an attack. We took a stereoscopic Roentgen-ray picture. In the site where the bone was removed is a very distinct shadow which looks like a solid body. At the time of operation Dr. Seelig, as was the custom at that time, took a piece of rubber tissue and placed it between the dura and the cortex. Our interpretation before operation was that there were deposits of calcium in the rubber tissue and that these probably were causing irritation. We turned down a flap, including the old scar, but somewhat above it, and found the rubber tissue exactly as a letter is in an envelope; it was nowhere near the brain. A membrane had developed between the cortex and the rubber tissue, and on nicking this membrane the rubber



tissue could be pulled out just as a letter is out of an envelope.

Not satisfied with that as an explanation for the trouble, we turned down a large flap of dura, which was nowhere adherent to the cortex, and as we found nothing, we went higher and rongeured away about 1 cm. of bone until we reached the arm center, and there we found a calcified tumor which was imbedded for about 1 cm. in the cortex. The tumor came out without difficulty and the patient made an uneventful recovery.

Half was examined by Dr. Shaefer, who found that it contained only calcium salts. The section of the tumor, after it was decalcified, showed no histologic structure that we could recognize and our only explanation is, although it is not at all proven, that it was a calcified tubercle.

Perhaps the most interesting point to me was just how to deal with the case in order to make the flap so that the skin would not be jeopardized and the blood supply cut off from the flap. Some years ago, at Bellevue Hospital, I did an operation on a patient who had a glioma of the cerebellum and who had a very thick scar, and ultimately lost the patient (though we got the tumor all out) because the blood supply in the region of the scar through which we cut was so poor that the area of skin became gangrenous. So ever since then I have always felt it extremely important in planning a flap to be perfectly certain that the original scar would not interfere with the blood supply of the skin flap. It is for that reason that I think it absolutely essential in tumor cases, at least when you do a preliminary decompression, not to use the incision Cushing first described by making a semicircular incision, but a vertical incision, so that if you ever want to go in on that side again, which you so often have to do, you can make a flap around it without in any way interfering with it.

#### DISCUSSION

DR. WILLIS YOUNG: Was that on the side of his original injury?

DR. SACHS: Dr. Seelig tells me that at the time of operation he was not convinced that there had been a depressed fracture there.

DR. F. W. BAILEY: What was causing the attacks?

DR. SACHS: The tumor.

DR. BAILEY: Do you think the tumor was not present at the time of the first operation?

DR. SACHS: I think it was present. Relief often occurs on simply opening, on decompression. No roentgenogram was taken at the time of the first operation; they did not then have tubes powerful enough to take skull pictures.

DR. LISTER TUHOLSKE: We have been using in many of these cases Lukens' nonadhesive membrane, peritoneum. We had a young fellow who had a gunshot wound and developed Jacksonian epilepsy. On examination we found adhesions all around the bullet opening in the skull. We relieved them. It has been eight months, and while he was having regular attacks before, he has had none since.

DR. SACHS: I have used that. After all, it seems to me it is better to use a patient's own tissues.

DR. W. C. G. KIRCHNER: Interesting in this connection is the fact that if this little tumor had existed at the time of the first operation, and these symptoms then subsided for a period of ten years in spite of the fact that a sort of foreign body was present, it might be that the decompressive effect accounted for the relief obtained. If that is the case, it certainly points to at least one extra procedure in operations of this type. Occasionally we have found these cases in which the Jacksonian epilepsy

would result following operations and injuries of the cranium and brain substance and the adhesions sometimes were directly to the scalp. I remember one very interesting case, in which a sort of status epilepticus had resulted, the convulsions coming on as often as half a minute apart, and immediately on the disturbance of these adhesions the convulsions ceased and the patient was, at least for a considerable period, considered cured.

DR. WILLIS YOUNG: I am inclined to think that Dr. Kirchner's suggestion that the decompressive effect incident to opening the skull is sometimes a factor in bringing about relief in these Jacksonian epilepsy cases is correct. A good many years ago I had as a patient a child 3 years old who was a congenital idiot. Over either parietal bone—the exact location I have forgotten now—there was a scar on the scalp and her parents, people of very limited intelligence, indeed, assured me that these scars were the result of the forceps delivery. Now I was afflicted with an idea that did not distinguish me from my fellow practitioners at that time that these idiots were idiots because their skulls were too small, not because their brains were too small; so I performed the operation that was then known as a linear craniotomy on both sides, one side at a time, a few weeks apart. In the first operation there was evident a scar on the bone corresponding to the scar on the scalp. The child was relieved of her epileptic seizures and never had another.

DR. SACHS: As regards the value of decompression in epilepsy, I think we all have had our temporary periods of satisfaction and then periods of depression when the epilepsy has returned. I remember some years ago a boy who spent most of his day throwing fits, and everything else had been tried. It was general epilepsy. The only localizing indication, or supposedly localizing, was a peculiar turning of the head when the attack began, and on the strength of that Dr. Allan Starr, who had charge of the boy, advised an exploration. We turned down a large flap and the boy's attacks immediately stopped for over a year, but at the end of the twelve months he started in again.

I think that has been the experience of a great many people, but I think the prospect of a perfectly frank Jacksonian epilepsy is a very much better one than of general epilepsy. I have given up entirely undertaking any operative procedures unless the diagnosis is frankly focal and unless we either have a very intelligent patient or relative who has seen the attack in detail, or we have seen it ourselves. If possible we keep the patient in the hospital long enough to see an attack ourselves, because parents are very prone to ascribe some focal character to the attack which when seen is not at all focal.

DR. KIRCHNER: Was this calcified body in the brain substance or in the dura?

DR. SACHS: It was buried in the brain and when removed left a hole large enough to put your thumb in.

DR. KIRCHNER: And originally, Dr. Seelig says there was a crack in the skull or some injury to the skull?

DR. SACHS: No. There was a history of depressed fracture, but at the time of operation the only things he found were adhesions between the dura and the cortex.

DR. KIRCHNER: I asked that question from the etiologic standpoint. I have noticed, as others have, that occasionally when we get fractures of the skull more or less remote from the time of injury we find a more or less organized clot of blood, and it occurred to me that calcium salts might be deposited in or around that substance, in that way becoming a foreign body.

DR. SACHS: I suppose this is possible, but it is very very improbable.

DR. KIRCHNER: It does not appeal to you as a cause?

DR. SACHS: I do not think so in this case. Then, too, there is the fact that there is another one absolutely in a different part of the skull, quite distant from the field of operation.

## COMPLETE CONGENITAL OCCLUSION OF THE COLON AT THE ILEOCECAL VALVE.

—By DR. CHARLES E. HYNDMAN.

Complete congenital occlusion of the large intestine is so rare and of such sufficient interest as to justify the report of a recent case under my observation at the St. Louis Children's Hospital.

Henry K., 2 days old, a boy born at full term, the seventh child in the family, five of whom are living and healthy. The sixth child died a few days after birth from some unknown abdominal trouble. The family history was otherwise negative. Soon after birth the child voided urine freely and nursed the breast. Later it began to vomit, at first light-colored fluid, followed by a dark, yellowish, foul-smelling substance. He continued to pass urine at intervals and to nurse the breast, but each nursing brought on more vomiting. The bowels did not move and enemas were given followed only by the discharge of small amounts of mucus. Oil was given by mouth, but this was quickly vomited. The child cried and appeared to suffer intensely.

On the second day the child was sent to the Children's Hospital. The baby was well formed, well developed, with no apparent deformities. He was crying, knees drawn up, the abdomen distended and tense. A mass the size of a large lemon could be felt a little to the right and below the umbilicus. A No. 14 catheter could be passed into the rectum about  $2\frac{1}{2}$  inches, where it met with obstruction. Oil and glycerin enemas were given, but they returned at once with only small strings of mucus. A diagnosis of intestinal obstruction was made and the child was prepared for immediate operation.

On opening the peritoneum a large, black, distended loop of small intestine presented, the base of which was twisted about itself several times. This was delivered, untwisted, its edges stitched to the belly wall, and the intestine opened outside. A large amount of thick, dark-green, tenacious meconium came forth. The large intestine was cordlike, about the size of a lead pencil, and could be traced along its course to where it ended in a culdesac about  $2\frac{1}{2}$  inches from the anus. Everything taken by mouth was promptly regurgitated. The child died in shock nine hours later.

At postmortem the entire gastro-intestinal tract was removed. The other organs seemed to be normal. The jejunum was distended with meconium and gradually increased in diameter into the big loop of the ileum, which was about  $1\frac{1}{2}$  inches in diameter and so twisted on itself as to cause a complete obstruction. Below this loop the ileum was smaller, gradually decreasing in diameter, and ending abruptly at the ileocecal valve. It contained a small amount of meconium, the villi were well developed, and the mucous membrane stained with bile pigment. The valve completely occluded the communication between the ileum and the cecum. Beyond the valve the colon was cordlike, with light-colored, thickened walls, contained a white, cheesy substance, and had a lumen that would admit only a small probe. The appendix was in normal position, free, small, firm and fibrous in character.

In reviewing the literature for the past ten years, I have been able to find very few similar cases on

record. In a series of over 111,450 patients recorded at the Vienna Foundling Hospital only two such cases were found.

Carl Weiland of Philadelphia, in 1896, reported a very similar case. His patient died forty-eight hours after birth without operation. The necropsy showed the small intestine greatly distended with "gas," especially near the ileocecal valve, where it reached a diameter of 18 mm. and equal to that of the caput cecum, with which it was continuous. The lower fold of the valve was very slightly developed, while the upper portion (the ileocolic fold) stretched completely across the lumen of the bowel, forming a complete septum between the colon on one side and the cecum with the appendix and small intestine on the other.

Tyfe in 1903 reported a congenital partial obliteration of the colon in a 7-month fetus, which died on the twenty-third day. At necropsy the large intestine was found to terminate in a culdesac at the splenic flexure, with little trace of bowel beyond except at the anus.

C. C. Burdick of New York found a premature child in whom about 10 cm. of the small intestine and the entire colon down to the rectum were occluded.

M. L. Hepburn in 1902 described an interesting case of a 2-day-old baby, with a culdesac about  $1\frac{1}{2}$  inches at the rectum. The colon and ileum were cordlike almost up to the jejunum. An interesting fact in this case was that two other children by the same mother had imperforate anus.

In a case reported by Jennings in 1890 the jejunum was enlarged. There was a gradual decrease in size and thickness of the ileum up to the cecum, with which it communicated freely; the lumen could admit only a probe. The upper part of the intestine contained meconium, but farther down this became thicker and ropy, gradually losing color and becoming white and cheesy as it approached the cecum. Below the ileocecal valve the bowel contained only mucus. An almost identical case, in which the child lived eight days after operation, is described by A. K. Paine of Boston.

In a patient of W. L. Stewell's, who died on the ninth day, there was a complication of constrictions of the small intestine. The stomach was 6 cm. long and constricted at the pylorus. The duodenum was dilated for about 6 cm., then another constriction occurred. Beyond this the intestine was a large pouch 25 cm. in length, terminating in a blind end. There was then a cordlike remnant of intestine 10 cm. long ending in the atrophied remains of the ileum 0.5 cm. in diameter and collapsed. The appendix was 4 cm. in length and attached to the first portion of the duodenum. The colon was less than 0.5 cm. in diameter until it reached the rectum.

Coley reports a case in which the colon and about 9 inches of the ileum were tapelike, the upper part of the small intestine being greatly distended. He also states that seven similar cases were collected by Therman. Thomas cites a case with the absence of the jejunum, ileum and greater part of the colon, the stomach and other organs being normal.

Craig described one case in which the colon was atrophied to the size of a quill. The mother in this case later died of intestinal obstruction.

There is obviously no favorable outlook for surgery in these cases and all are necessarily fatal. It is impossible to state the cause of such a peculiar arrest in the development, which affects only the intestine and allows the other organs to develop normally. Whether coincident or not, it is interesting to note that nearly all of these cases were in boys, and that these defects occurred more than once in certain families.

It seems in my case, however, that, since the works



on embryology state that the colon is developed during the fourth month, and that the meconium appears about the end of the fourth month, and since we have here meconium in the small intestine and not in the colon, the arrest in development must have occurred during the fourth month.

## DISCUSSION

DR. FREDERIC HAGLER: I saw a very interesting case quite similar to one of the cases Dr. Hyndman mentioned. This was a 5-day-old boy, born at term, of healthy parents. It was brought into the City Hospital with the history that there had been no bowel movement since birth, a gradual distention of the abdomen, and persistent regurgitation of food and a dark material. Enemas produced no result. Dr. Young made an exploratory and found a wide dilatation of small intestine; I think the loop that he picked up was at least 2 inches in diameter. He made an enterostomy and closed. The child died on the second day following the operation. We were not able to get permission for necropsy, so we opened the abdominal wound and inspected the gastrointestinal tract and found the stomach dilated and an increasing dilatation to the lower ileum to a point about 30 inches from the ileocecal valve, after which it was occluded. The intestine was reduced to a mere fibrous cord a few centimeters long at this point, and then the intestine was collapsed, and a few centimeters further down there was another fibrous cord; there were three or four of these so that the intestine looked like a string of wienerwursts, except that the cord between was several centimeters long. The ileocecal valve was patent and the colon normal, except that it was collapsed.

DR. E. SACHS: We had a case at the Children's Hospital about a year ago similar to the one Dr. Hyndman reported. The case was diagnosed on the basis of roentgenograms as a pyloric stenosis. The child was at least 7 months old. It was operated on by Dr. Murphy for pyloric stenosis. He did a gastro-enterostomy to relieve the obstruction. The child died and at necropsy it was found that there was a complete obstruction between the second and third portions of the duodenum, a membrane which completely occluded the duodenum. A curious thing about the case was that the child had swallowed six or seven olive pits which were caught in the obstruction.

DR. M. B. CLOPTON: There is nothing much to discuss about these cases surgically; they are of interest mainly to the embryologist. Apparently, there are certain localities in which this occlusion is more likely to be found. In Dr. Hyndman's series of collected cases the lower part of the ileum seems to be a favored place, and in the duodenum there have been quite a number of such instances.

I think the case that Dr. Sachs had in mind was not a complete occlusion. There was only partial occlusion, the membrane being partly open at one point, as I recall it. There is a case in the museum with complete occlusion in the duodenum. They do not offer, so far as I know, any chances for surgical interference.

DEMONSTRATION OF SPECIMEN OF CON-  
GENITAL VOLVULUS.—By DR. ROLAND HILL.

Dr. Hyndman told me he was going to review the literature of this condition, so I brought this specimen to show.

The child, C. B., was born March 1, 1916, a fully formed, fully developed child. There were three other children born into the family, and one gave a history identical to that of the child of whom I am speaking. This child was vigorous, kidneys acted well, but nothing ever passed from the bowel. She

was constantly vomiting; did not seem in very great pain, but vomited everything that was taken. She seemed hungry and would take food with great regularity, but nothing was retained. Small enemas could be given, but nothing came from the bowel. The peristaltic movements were very marked. It was unquestionably a case of intestinal obstruction and I naturally thought of a band, as I had not seen a condition of this sort.

The child entered the hospital on March 5. I opened the abdomen, making an incision through the right rectus just to the right of the median line. I was confronted with an immensely distended loop of bowel of the small intestine. On striving to investigate the condition I found that the cecum and ileum at that point were cordlike. I looked over at the descending colon and found that it was not much bigger than a lead pencil. I traced the ileum upward and found it narrow and cordlike, but not uniformly small; while it was very small, it was larger at some places than at others. After going over a few feet to, I should judge, the lower part of the jejunum, I found a complete volvulus in the small intestine. At this point it was simply a cord. The bowel before the volvulus rather tapered somewhat and there it was absolutely twisted and impervious.

We untwisted it and got it straight, put it back, and closed the abdomen. They claimed afterward that a little gas passed; there was a slight stain on the clothing, but very slight. The vomiting continued and the child died two days later. I had the bowel removed and found we could not even force water through it.

DR. W. T. COUGHLIN: It is interesting to note that in both these cases there is a narrowing of the course down toward the end of the ileum. The blood supply may have something to do with this condition; that is, the terminal part of the blood supply of the intestine. The superior mesenteric artery empties near the lower end of the intestine and is supposed to affect the diverticula. It is interesting to note that this may have been due to some arterial disease or something of that kind.

SPECIMEN OF DERMOID CYST OF OVARY  
WITH TWISTED PEDICLE.—By DR. ERNST  
JONAS.

Benign tumors of the ovaries are often not benign in the clinical sense, inasmuch as they destroy health and even life after they reach a certain age and correspondingly great size; but even before ovarian tumors attain great size complications arise not infrequently which make their removal necessary. The most frequent and disastrous complication of ovarian tumor is the torsion of the pedicle. According to Kustner, the torsion, when it occurs, takes place in a definite direction. All right-sided tumors are twisted toward the left; left-sided tumors, toward the right. Moderate degrees of torsion are without bad effect; but greater degrees, four or five complete turns, may completely occlude the vessels of the pedicle or even destroy the pedicle to such an extent that the tumor has no connection with the genitals.

The first result of torsion is a compression of the compressible veins of the pedicle and interference with the return flow of blood from the tumor. The consequence is congestion of the whole tumor, rapid increase in size, and bleeding into the tumor. The tumor looks bluish red and is filled with blood coagula. This might be termed the first stage and is the result of interference with the venous circulation. If the torsion of the pedicle is still greater the arterial blood current also is interrupted, the tumor ceases to be nourished and in quick succession symptoms develop of acute peritonitis, fever, great pain, meteorism and vomiting. Later, as a result of this peri-



tonitis, adhesions develop between tumor and intestines, omentum, abdominal wall, etc. The tumor may gradually become strongly adherent, so that it is nourished again and continues to grow.

Most textbooks advise to wait with operation, when torsion of the pedicle occurs, until the acute symptoms have disappeared. From experience I believe this is poor advice. Existence of torsion of the pedicle is to me a strict indication for the immediate removal of the tumor. It is surprising to hear patients who in the first days after torsion has taken place gave the impression of extreme illness, express astonished satisfaction at their feeling of complete well-being. The operation is one of the most grateful; the tumor is removed and there is immediate relief from pain and all distressing symptoms. There is another advantage in performing the operation in the acute stage of the torsion, in that the operation is much simpler. If weeks or months or years elapse before operation, the presence of strong adhesions will make the task more difficult.

The tumor which I present to you tonight was removed on April 10. It is a dermoid of the right ovary. The bearer of this tumor is a woman 44 years old, the mother of six children, the oldest 21 years old, the youngest 9 years old. The patient has been in good health all her life. She is still menstruating regularly and without disturbance.

The onset of sickness was on April 8, with pain all over the abdomen, nausea and vomiting. On April 7 she had pain in the region of the appendix and marked rigidity of the abdominal muscles, evidenced especially in the right iliac region. The temperature was 101.5. The diagnosis made was acute appendicitis and the patient was put on the starvation method to get her to the interval period.

I was called on April 9 to corroborate the diagnosis. I found a patient suffering from severe pain in the abdomen and the symptoms as above mentioned. The leukocyte count made at my request was only 11,000. On vaginal examination I found a tumor in the right side of the pelvis filling about the right half of the pelvic cavity. The tumor felt slightly cystic. I made the diagnosis of cystic tumor of the right ovary and suggested immediate removal. On opening the abdomen I found the tumor with the pedicle twisted to the left about two and a half times; a moderate plastic exudate between tumor, uterus and intestines, which was easily separated, the pedicle untwisted and ligated. There was quite marked bleeding into the broad ligament and the pedicle looked gangrenous in parts. The patient made a good recovery and will get out of bed tomorrow.

I brought this up particularly for the reason that I had a very sad experience in a similar case. I was called in consultation about two years ago to see a patient with diffuse peritonitis. At the first visit I was not quite sure what the appendicitis was due to, whether it was appendicitis or a twisted ovarian tumor. The abdomen was greatly distended, giving the appearance of pregnancy. I told the doctor in charge that I thought he had to deal with a twisted ovarian pedicle. The patient was in extremely bad condition, and the doctor decided to wait a few days. When I came back in a few days to meet him again the diagnosis was without doubt. The patient was feeling better, however, and the doctor said, "Now, we will wait a few weeks until the patient is in really good shape and then we will take out the tumor." We agreed that I should meet him again on a Sunday morning, but I was called up early on that morning by the doctor who informed me that the patient had suddenly died during the night. I have no doubt that death in that case was due to embolus from thrombus in the twisted pedicle.

DR. WILLIS YOUNG: The twisting of the pedicle of an ovarian cyst is a very interesting phenomenon.

The effect that the twist may have on the growth of an ovarian cyst is well illustrated by an instance which came under my observation about a year and a half ago. A young miss of 16 or 17 was spending her vacation in the country and she indulged in the juvenile joy of sliding down a haystack. She landed pretty hard and her mother invited the doctor in that neighborhood to see her. He made a careful examination of the abdomen. The child seemed to be all right; certainly there was no enlargement of the abdomen.

Seven weeks later I had the privilege of seeing this young lady and she then presented a very considerable abdominal tumor which proved to be an ovarian cyst with a twisted pedicle. How often twisted I do not know, but enough to make it gangrenous. The tumor was a multilocular ovarian cyst.

I do not state that the bump she got was sufficient to make the pedicle twist, but the chronology was such that though no tumor was found at one end of the period, at the other end of the seven weeks' period a tumor was found, undoubtedly due to the twist.

DR. W. C. G. KIRCHNER: It might be interesting to note, in connection with the diagnosis of appendicitis and twisted pedicle, that in one instance a tumor of the left ovary was by manipulation moved over to the right side, the twisting having occurred with certain symptoms of appendicitis. This specimen I presented at the club, I think last year. The association of appendicitis with twisted pedicle is one which demands attention.

DR. F. W. BAILEY: I think we are inclined to look on any disturbance in the abdominal cavity as appendicitis until it is proved otherwise. In three instances I have had occasion to operate on supposed acute appendix cases which proved to be ruptured ectopic pregnancy.

DR. JONAS, closing: The diagnosis of twists of large ovarian tumors is not frequently overlooked, but one of the main reasons for presenting this tumor is just to call attention to the twisting of the pedicle in small-sized ovarian tumors. If the abdomen is greatly distended and the symptoms are not such that the physician thinks the distention is entirely due to a septic peritonitis, then of course he will think more quickly of the possibility of an ovarian tumor. But in the ovarian tumors of smaller size the diagnosis is easily overlooked and was overlooked in this case by the attending internist. There is no doubt that we should operate on all tumors of the ovary, cystic or not, as soon as they are diagnosed.

#### SPECIMEN OF GALLBLADDER.—By DR. WILLIS YOUNG.

The patient was a woman 58 years old. The first attack of colic occurred three months ago, the first severe attack one month ago. The present attack has lasted four days and is very severe. On March 24, by accident, she took by the stomach  $1\frac{1}{4}$  grains of morphin. She was pretty well poisoned, but after treatment she got over it so that on the 31st there was no evidence of the morphin poisoning with the exception of the pupils being still well contracted. There was no jaundice during any attack, but great tenderness in the epigastrium and gallbladder region. The Murphy test of her gallbladder was very painful. An unusual condition was the absence of rigidity of the right rectus muscle, possibly due to the morphin she had taken a few days before.

A diagnosis was made of an acute cholecystitis with a stone in the cystic duct and she was operated on the next day. This gallbladder is of interest for two reasons; one, that there were no adhesions and that the stone was not in the cystic duct, but in the

vestibule of the gallbladder. This operation was done during an acute attack. She had no leukocytosis and the absence of fever and accelerated pulse further emphasized the anatomic and physiologic fact that the gallbladder is not affected by lymphatics and glands on this side of the vestibule.

I took occasion to remove the gallbladder because it was thrust on me and incidentally tried two small changes, perhaps of no importance, in the technic. Ordinarily one is supposed to tie a string around the cystic duct, but that brings two mucous surfaces together, and in practically all such cases the bile will leak and that is not especially desirable unless there should be an attack of cholangitis and then it would be better to drain the common duct directly. I took the opportunity of making a Cushing's basting stitch suture across the ends of it. Then, instead of attempting to tie a drainage tube down to the stump of the cystic duct, I took a rubber tube, cut a fenestra in it some little distance from the end of the tube and having left the ends of the catgut basting stitch hang, they were drawn through this fenestra inside the tube and by that means the tube was pushed well down. When we wanted to remove it we did not need to wait for the catgut to absorb, but simply cut the catgut from around the bit of gauze which holds it and the tube is readily removed. This is the second time that I have made the basting stitch method for the coverings of the cystic duct and in neither instance has there been any bile leakage.

### TRI-COUNTY ASSOCIATION

The Tri-County Association of Bates, Henry and Vernon Medical Societies met at Clinton with the Henry County Medical Society on Wednesday, Dec. 13, 1916. The trains were late on account of a storm, which cut down the attendance. Those present at the luncheon given by Dr. N. I. Stebbins at the Clinton Hospital were: J. F. Robinson, Nevada; F. W. Foster, Butler; W. Cline and R. J. Smith, Appleton City; E. C. Peelor, Coal; C. W. Head, J. H. Walton, T. A. Blackmore, R. J. Jennings and R. L. Shadburn, Windsor; J. R. Hampton, A. E. Derwent, S. W. Woltzen and F. M. Douglass, Clinton. Drs. L. S. Milne and Howard Hill of Kansas City, guests of honor.

At 2:20 p. m. the meeting was called to order at the High School Building by President Head. Beside those named there were present Drs. W. P. Bradley and C. M. Craig, Nevada; S. A. Poague, A. J. McNees, W. R. Campbell, J. R. Wallis, Bernice B. Barr, J. J. Russell, J. G. Beatty and C. Alley, Clinton.

Dr. L. S. Milne, with the aid of lantern slides demonstrated the actions of various vaccines on several diseases, showing what good or bad results were gotten from them, how administered, and giving a résumé of the present knowledge of the subject and by whom investigated. It was a very instructive lecture and by the attention paid to it all present showed they were interested.

Dr. Howard Hill, by use of the lantern showed the anatomical structures of the floor of the pelvis and their use in the normal body and what could be expected if there was any deviation from the normal, then the technic of repair and how it could be done in the best and most simple manner. This was instructive as well as interesting.

Dr. T. A. Blackmore read a paper on "The Relation of Nasal and Oral Sepsis to Systemic Disease." This was discussed by Drs. Milne and Hill with favorable comments to the writer and claiming that while these parts of anatomy were so often at fault yet it was very necessary to be conservative and by an exhaustive and thorough diagnosis prove the fault and where it leads to. All this was in line with what the reader had claimed. Three excellent subjects and well handled. This ended the Tri-County meeting.

The election of officers was the order for the Henry County Medical Society. Dr. Head in calling up the order read a portion of the Constitution that said: "Nomination for office should be by informal ballot," and named tellers to do it. For president Dr. A. J. McNees was nominated by a majority of votes cast and he was elected without a dissenting vote. In the same manner Dr. J. R. Hampton was elected vice president. On motion the rules were suspended and F. M. Douglass was reelected secretary-treasurer by a unanimous vote. Dr. R. J. Jennings was elected censor for three years. Dr. J. H. Walton was elected a year ago as delegate for two years and Dr. A. J. McNees as alternate at the same time so late adjournment was voted.

F. M. DOUGLASS, M.D., Secretary.

### BUCHANAN COUNTY MEDICAL SOCIETY

The business session of the Buchanan County Medical Society was held at their rooms Wednesday evening, Dec. 6, 1916; forty-six members present, the president, Dr. Charles Geiger, in the chair. The minutes of the previous meeting were read and approved.

A communication from Jesse Cunningham, Librarian, requesting the society to renew its subscriptions for medical journals was read and on motion the secretary was instructed to order these subscriptions discontinued.

The various standing committees were called on for reports but none was forthcoming. The Committee on Permanent Headquarters presented their report, which included a proposition from the St. Francis Hotel to execute a lease for one year at the rate of \$900 per year for a term of one year. The committee was continued and instructed to solicit subscriptions and confer with the dental and druggist organizations to see what cooperation might be expected from those bodies and report at our next business meeting.

The Banquet Committee, through the chairman, Dr. H. S. Fargrave, reported arrangements completed for the banquet to be held at the Hotel St. Francis, Wednesday evening, December 20; plates \$2 each.

The secretary was instructed to assure the Welfare Board that the Buchanan County Medical Society would indorse the staff proposition of the board for hospital work, the members of the society pledging their services without pay.

The election of officers for 1917 resulted as follows: President, F. H. Spencer; first vice president, W. L. Kenney; second vice president, G. A. Lau; secretary, W. F. Goetze, treasurer, J. M. Bell; censors, P. I. Leonard, 1917-18, J. B. Reynolds, 1917-19, F. H. Ladd, 1917; delegates, Daniel Morton, 1917, H. S. Forgrave, 1917-18; alternates, L. J. Dandurant, 1917, J. J. Bansbach, 1917-18.

W. F. GOETZE, M.D., Secretary.

### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society met in the Commercial Club rooms Monday, December 11, with the following members present: Drs. Cunningham, Blaylock, Howard, Schulz, Walker, Wichterich, Wilson and Yount. Visitor, Dr. O. L. Sebaugh.

The minutes of the last two meetings were approved as read.

The applications for membership of Dr. O. L. Sebaugh of Cape Girardeau, and Dr. E. K. Statler of Sedgewickville, were read and turned over to the Board of Censors.



After the transaction of routine business, election of officers for the year 1917 resulted as follows: President, Dr. D. H. Hope; vice president, Dr. R. D. Blaylock; secretary, Dr. E. H. G. Wilson; treasurer, Dr. W. N. Howard; delegate, Dr. G. W. Vinyard; member of Board of Censors, Dr. George W. Walker.

On motion the society adjourned.

E. H. G. WILSON, M.D., Secretary.

### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, December 14, at 2 o'clock p. m. The president being absent, Dr. B. B. Tout, first vice president, called the meeting to order. The following members were present: B. B. Tout, Archie; H. S. Crawford, A. R. Elder, D. S. Long and J. S. Triplett, Harrisonville.

There being no one present who was on the program, the scientific program was dispensed with.

The annual report of the secretary-treasurer was read. It showed the society to be in good condition. There were thirty members and eight non-members during the year. All expenses of the society had been paid and there was a balance in the treasury of \$34.24. The meetings during the year were interesting and fairly well attended.

The following officers were elected for 1917: C. S. Dodd, president; W. A. Fair, first vice president; A. R. Elder, second vice president; H. S. Crawford, secretary-treasurer; R. D. Ramey, member of board of censors for three years; H. Jerard, delegate and H. S. Crawford, alternate, were elected a year ago and therefore serve another year.

H. S. CRAWFORD, M.D., Secretary.

### CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met at the Snapp Hotel, Excelsior Springs, Monday evening, Nov. 27, 1916, with sixteen members present.

After the usual preliminaries, Dr. John H. Rothwell of Liberty opened the scientific program with a paper on "Some New Points in the Study of Blood Pressure."

The weight of the doctor's investigation was placed on the diastolic pressure and its relation to the systolic. The nearer the approach of the two phenomena numerically, the more grave the condition of the patient. He found the diastolic pressure a convenient means of estimating conditions at the aortic orifice. He believed the diastolic pressure of more diagnostic importance than has been realized. Some expert authorities were quoted by Dr. Rothwell, whom he had interviewed first-hand. The paper was an able one and showed the thoroughness of the essayist in his work and the accuracy of his observation.

Dr. G. A. McCulloch read a paper on "Cancer of the Breast." This paper abounded in apt suggestions and many shots that went home. The doctor emphasized the statement that "the fate of the patient is in the hands of the first physician who examines her." It was a good paper.

Dr. E. C. Robichaux read a paper entitled "Are Our Bath Treatments Satisfactory?" This paper had reference to conditions at Excelsior Springs as a health resort. Seven of the leading superintendents of bathing establishments were invited to hear the paper. This was considered a good move on behalf of the Excelsior Springs membership, and much good is anticipated therefrom.

Dr. J. T. Rice made an interesting talk on behalf of our board of censors. Dr. Rice is an entertaining speaker, and touched deftly on the ethics of running to the newspaper with every operation or obstetric case and said he was glad that the local profession

had grown either too opulent or too dignified to keep up the practice. Dr. Rothwell, also of the board, said some potent things about cut prices in insurance examinations. He furnished some concrete examples of standing for a fee commensurate with good work. Dr. J. F. Grace spoke along the same line. The Clay County Medical Society is not made up of cut-rate men.

Our society will send two men to the meeting of the Children's Code Commission, one of whom will be Dr. F. H. Matthews, our president. *We do move.*

J. J. GAINES, M.D., Secretary.

### GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met Nov. 16, 1916, in Smith's Hall at Hermann, at 2 o'clock in the afternoon with the following members present: Drs. Frederick Aufderheide, president, John D. Seba, secretary, John S. Enloe, L. E. Souder, Howard Workman, H. J. Rickhoff, F. H. Caughell and Isaac G. Cook. Visitors present: Drs. W. H. Luedde, F. M. Barnes and Roland Hill, St. Louis, and Dr. H. E. Pearse, Kansas City.

The first order of business was the election of officers for 1917, which resulted as follows: President, Dr. Frederick Aufderheide, Drake (reelected); vice president, Dr. Howard Workman, Potsdam; secretary-treasurer, Dr. John D. Seba, Bland (reelected).

Dr. W. A. Sibley of Owensville was elected a member.

The following scientific program was rendered:

Dr. Roland Hill of St. Louis reported several cases of interest, the first being a case in which he made a urethra to replace one that had been torn away by a gunshot wound. The second was a case of hour-glass contraction of the stomach due to an ulcer. The report was very interesting and was liberally discussed.

Dr. W. H. Luedde delivered a lecture on the early correction of cross-eyes in which he dwelt on the importance of early treatment before the sight of the cross-eye was lost by ignoring the impressions sent to it by rays of light but which were suppressed on account of the cross-eye not being in line with the straight eye and thus producing double vision. In order to avoid this double vision the sight or impression by the cross-eye is suppressed until vision is lost by its non-use.

Dr. F. M. Barnes delivered a lecture on mental health and the psychology of the mind. He dwelt on the abnormal mind, or insanity. He was asked many questions concerning impending cases of insanity. He explained dementia praecox. He said that 15 per cent. of all cases of insanity were due to alcoholism, 25 per cent. were due to syphilis and 25 per cent. due to inheritance, or rather a predisposition to insanity. All other cases were probably due to some kind of infection.

Dr. W. C. Bryan addressed the society on the differential diagnosis of diphtheria and tonsillitis, bringing out the fact that death from diphtheria was very common unless diphtheritic serum was used, but that on the other hand death from ordinary tonsillitis rarely if ever took place.

The visiting doctors were taken by Dr. H. J. Rickhoff to visit the Stone Hill Wine Cellars, said to be the second largest in the world. The doctors were furnished an escort through the cellars and many caskets were inspected that had a capacity of over twelve thousand gallons.

The evening session was presided over by Dr. Seba in the absence of the president, and he introduced the various speakers. There were about one hundred people in the audience, including men, women and



children. The first speaker was Dr. Herman E. Pearce of Kansas City, whose subject was Public Health. He made an earnest plea for larger parks and playgrounds, laying stress on the fact that play was a child's work whereby he develops his physical being, and that without a strong physical body the resistance to disease is negligible.

Dr. F. M. Barnes of St. Louis spoke on Sanity of the Mind and Purity of Thought, and again explained the psychology of the mind and why so many people lose their power of reason.

Dr. W. H. Luedde of St. Louis gave a stereopticon lecture on the work of the Commission of the Blind. The pictures illustrated many people who were blind from birth through the fault of the doctor or nurse who failed to properly disinfect the eyes of the newborn.

JOHN D. SEBA, M.D., Secretary.

#### GREENE COUNTY MEDICAL SOCIETY

At the meeting of the Greene County Medical Society, held Friday, December 8, the following officers were elected for the ensuing year: President, Dr. William Kienhoff; vice president, Dr. J. C. Matthews; secretary, Dr. T. O. Klingner; treasurer, Dr. E. F. James; censor, three years, Dr. G. W. Barnes; delegate, two years, Dr. S. A. Johnson; alternate, two years, Dr. O. C. Horst.

The society has enjoyed a most excellent year under the presidency of Dr. C. W. Russell. The attendance has been good, the interest taken in the scientific work demonstrating that the profession is beginning to realize more and more the benefits of our organization.

T. O. KLINGNER, M.D., Secretary.

#### HOWELL COUNTY MEDICAL SOCIETY

The Howell County Medical Society held its last meeting of the year at West Plains, Dec. 14, 1916. A good program was enjoyed and the attendance good in spite of a 7-inch snow which is still falling.

Officers elected for 1917 are as follows: President, Dr. W. O. Culpepper, Willow Springs (reelected); vice president, Dr. E. M. LeCompte, Willow Springs; secretary-treasurer, Dr. J. C. B. Davis, Willow Springs; Dr. H. C. Shuttee continues as delegate to the meeting of the state association.

The society adopted a resolution to support the commission appointed by Governor Major for child welfare (Children's Code Commission), and our senator and representative from this district will be notified accordingly. Also they are instructed to vote right on the optometrist question again. We also adopted the outline of study recommended by the American Medical Association and shall follow it this coming year. We have at present nine unpaid members for 1917, which I am notifying again and will wait until the last of this month to send in my report, hoping we all will pay up. In addition to our list of old members we have one or two prospectives whom we are trying to interest in our society.

R. E. HOGAN, M.D., Secretary.

#### LAFAYETTE COUNTY MEDICAL SOCIETY

The Lafayette County Medical Society held their regular meeting in Higginsville, Dec. 12, 1916, in Dr. Braecklein's office. Those present were William A. Braecklein and William C. Webb of Higginsville; A. J. Chalkley, J. Q. Cope, C. T. Ryland and Tucker of Lexington; Otto G. Octting, J. A. Schneider and F. M. Schreiman of Concordia. In the absence of the president and vice president, the president-elect Dr. J. A. Schneider, was chosen chairman, who wielded the gavel impartially.

After routine business, the time was well applied (as no program was rendered) in discussing ways and means for successfully conducting the society for 1917, to make it a banner year in all respects, in paying dues and of making interesting society meetings. It also was voted to have an annual banquet.

A good beginning was made there and then as all present paid their dues for 1917, and a program was submitted for the January meeting at Lexington, a Symposium on Pneumonia and the flood-gates of oratory are to be opened in the following manner: Pathology, Dr. Morley; Diagnosis, Dr. Schreiman; Medical Treatment, Dr. Chalkley; Biological Treatment, Dr. Braecklein. Come one, come all!

FERDINAND M. SCHREIMAN, M.D., Reporter.

#### LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The Lawrence-Stone County Medical Society met at Aurora, Dec. 5, 1916. The following physicians were present: Drs. C. A. Moore, R. C. Robertson, T. D. Miller, F. S. Stevenson, J. A. Melton, W. S. Loveland, J. W. Smith, J. A. Hains, F. W. Shaw, J. P. Andrews, T. T. O'Dell, W. M. Holmes, O. N. Carter, H. L. Kerr, R. W. Smart, H. A. Lowe and William J. Wills.

Dr. Frederic W. Shaw of Mt. Vernon was elected to membership in the society.

The following officers were elected for the year 1917: President, Dr. C. A. Moore; vice president, Dr. T. D. Miller; secretary, Dr. R. C. Robertson; treasurer, Dr. F. S. Stevenson; delegate, Dr. W. S. Loveland; alternate, Dr. J. P. Andrews; censor, Dr. J. A. Harris.

Dr. Frederic W. Shaw read a very interesting paper on "The Treatment of Tuberculosis at the Missouri State Sanatorium." This was a splendid paper and brought out an interesting discussion.

Several interesting clinics were brought before the society and discussed.

The next meeting will be held at Aurora, in March, 1917.

R. C. ROBERTSON, M.D., Secretary.

#### LEWIS COUNTY MEDICAL SOCIETY

The Lewis County Medical Society met at the Hotel Quincy, Nov. 15, 1916. Members present: Drs. H. E. Dunlop, William L. Ellery, P. W. Jennings, J. R. Hamlin, C. O. Shanks, J. C. Brown, S. W. Holt, R. E. Wilson, W. C. O'Neal and Ray Mercer. Visitor: Dr. McCuchan. The meeting was called to order by the vice president, Dr. H. E. Dunlop. The minutes of the last meeting were read and approved.

Motion was made that the society adopt \$15 as the fee for normal labor. Seconded and carried.

The application of Dr. George L. McCuchan was read and he was elected by unanimous vote.

Motion was made that the by-laws be amended so that the society shall have six regular meetings a year, the time and place to be designated by the president and secretary.

The election of officers for the ensuing year resulted as follows: President, Dr. H. E. Dunlop, Canton; vice president, Dr. John C. Nunn, Maywood; secretary and treasurer, Dr. Roy E. Wilson, LaBelle; censor, Dr. Perry W. Jennings, Williamstown.

Motion was made that the society extend a vote of thanks to Dr. Ray Mercer for the way he has conducted the affairs of the secretary in the last two years. Seconded and carried.

The committee on resolutions on the death of Dr. Ford reported as follows:

WHEREAS, Our esteemed and worthy practitioner, Dr. John Ford, after a long life of usefulness has been called to his reward, and

WHEREAS, He was a faithful member of the Lewis County Medical Society and loyal to his profession, a true friend and honored not only as a physician but as a citizen, and

WHEREAS, The medical profession and the community at large of Lewis County have suffered a severe loss in the death of Dr. Ford, therefore be it

*Resolved*, That the Lewis County Medical Society has lost one of its most highly respected members, and that as a profession we feel that we are better men for having known and associated with Dr. Ford, and be it further

*Resolved*, That in token of respect and esteem in which he was held by the members, the Lewis County Medical Society extends to the family their sincere sympathy in their bereavement, and be it further

*Resolved*, That a copy of these resolutions be sent to the family of the deceased, to the State Medical Journal, and a copy spread on the minutes of the society.

C. O. SHANKS,  
PAUL F. COLE,  
P. W. JENNINGS.

On motion the resolutions were adopted by unanimous vote.

The president appointed Drs. Cole, O'Neal, Brown and Holt on the program next meeting.

RAY MERCER, M.D., Secretary.

#### LIVINGSTON COUNTY MEDICAL SOCIETY

At the annual meeting of the Livingston County Medical Society the members were the guests of Drs. H. M. Grace and A. J. Simpson at the Chillicothe Hospital, Nov. 20, 1916. At 7:30 p. m., the parlors were well filled and after an informal reception the guests were invited to the banquet hall where was served a splendid turkey dinner by the nurses.

The meeting of the society was called to order by the vice president, Dr. W. M. Girdner, Chillicothe. The minutes of the previous meeting were read and approved.

The next order of business was the election of officers for 1917, which resulted as follows: President, W. M. Girdner, Chillicothe; vice president, George Morse, Ludlow; secretary-treasurer, J. C. Shelton, Chillicothe; delegate to the state meeting, Reuben Barney, Chillicothe; alternate, H. M. Grace, Chillicothe.

The secretary read the applications of the following doctors who were duly elected to membership: Alfred Collier, Avalon; Messiah Mesropean, Clarence M. Grace and Calvin L. Woolsey, Chillicothe, and Luther P. Carlyle, Chula. Dr. Robert Cubbe was elected to honorary membership.

The following members of nearby county societies were present as guests: Dr. E. J. Mairs, Laredo, Grundy County; Drs. W. H. Musgrove, Eversonville, and M. L. Clint, Meadville, Linn County; Drs. C. B. Woolsey and George S. Dowell, Braymer, Caldwell County; other visitors were Drs. O. H. Ridings, Meadville, W. E. Thompson and M. M. Russell, Chillicothe.

The president, Dr. Thomas E. Graham, who was just moving to St. Louis, called up and expressed his regrets at not being able to attend.

The president-elect, Dr. Girdner, acting as toastmaster, called on everyone present for a word for the good of the society and the medical profession in general. Almost everyone responded and many spiefy talks were given and greatly enjoyed by all. Many spoke of the improved condition of the Chillicothe Hospital and the society by a rising vote voiced its appreciation of the splendid hospitality accorded us during the evening and pledged their united support in every way to make the hospital a real success.

An effort is being made to enroll every eligible physician in Livingston County as a member of the County Medical Society before Jan. 1, 1917.

At the conclusion of the meeting the company was invited into the operating rooms to witness a tonsillectomy by Dr. A. J. Simpson.

J. C. SHELTON, M.D., Secretary.

#### MACON COUNTY MEDICAL SOCIETY

The Macon County Medical Society met in Macon, Nov. 14, 1916, at 1 o'clock, with the following physicians present: Drs. A. L. Cambrie, T. P. Gronoway, S. T. Ragan, C. W. Reagan, W. J. Harned, J. R. Hunt, W. H. Miller, Ed. S. Smith, A. B. Miller, Edwards, and J. W. Haden.

After the regular business the program was rendered as follows: Dr. T. P. Gronoway read a paper on "Phagocytosis." Dr. A. L. Cambrie read a paper on "Anaphylaxis." Dr. Ed. S. Smith read a paper on "Leukocytosis." Dr. S. T. Ragan read a paper on "Serology," with special reference to the Wassermann test and spinal fluid.

These papers showed much study. The subjects were well presented, reflecting credit on the authors and on the society as well. It was a very profitable meeting and our "boys" show that they are still studying medicine. The interest grows from meeting to meeting.

The following program has been arranged for the next meeting: "Poisonous Proteins," by Dr. Nickell. "Unusual Cases of Peritonitis," with report of three cases of pneumococcal peritonitis, by Dr. T. P. Gronoway. Questionnaire: When May a Patient Be Declared Dead? Dr. J. R. Hunt. Why Is Cerebral Hemorrhage Usually in the Left Side? Dr. F. W. Allen. Where Is the Lesion in the Brain When Paralysis of Face and Arm Is on the Same Side? Dr. A. L. Cambrie. Is Memory Confined to the Brain Cells? Dr. E. S. Smith.

The society is arranging for a joint session soon with the dentists of the county in a discussion of oral infection.

A. B. MILLER, M.D., Secretary.

#### PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society met in Clarksville, Dec. 4, 1916. This being the annual election of officers the following were elected for 1917: President, Dr. Robin J. Guy, Paynesville; first vice president, Dr. Charles E. Gibbs, Bowling Green; secretary, Dr. F. V. Keeling, Elsberry; treasurer, Dr. C. L. Bankhead, Paynesville.

Next meeting will be held at Clarksville, March 5, 1917.

On motion the society adjourned.

I am trying hard to get all our dues in by January 1.

F. V. KEELING, M.D., Secretary.

#### PLATTE COUNTY MEDICAL SOCIETY

The Platte County Medical Society met in Platte City, Dec. 6, 1916. Members present, Drs. Naylor, Redman, Hull, Herndon, Clark, Durham, Calvert, Shultz.

After an excellent dinner the members met in the office of Drs. Redman and Naylor. The president being absent, Dr. Naylor, vice president, presided.

This being the meeting for the election of officers for 1917, the following were elected: S. L. Durham, Dearborn, president; J. W. Shultz, Weston, vice president; Spence Redman, Platte City, secretary and treasurer; Alva Naylor, Platte City, member of board



of censors to succeed Dr. Hale. Committee on Health and Legislation, A. S. Herndon, Chairman, L. C. Calvert and H. M. Clark.

Dr. Wilson Murray of Platte City was elected a member of the society.

The report of the secretary and treasurer showed that six meetings had been held during 1916, average attendance five and two-fifths; number of papers presented, seven; number of visitors reading papers, two; amount of cash on hand, \$81.65.

It was moved and seconded that we pay out of the treasury each member's dues for 1917 and a receipt for same be sent each member. Carried. Moved and seconded that we meet in Platte City each month of 1917 and that January, February, March and April meetings be held afternoons and balance of year evenings. Carried.

A. S. HERNSON, M.D., Secretary.

### STE. GENEVIEVE COUNTY MEDICAL SOCIETY

The Ste. Genevieve County Medical Society held its annual meeting Dec. 13, 1916, Vice President Hinch in the chair. Dr. L. J. Birsner was elected secretary pro tem. The minutes of the last meeting were read and approved. The financial statement for the year 1916 was read by the treasurer showing a cash balance on hand, and it was approved.

The board of Censors reported favorably on the application of Dr. L. J. Birsner of Ste. Genevieve, and he was unanimously elected a member.

The following officers were elected to serve for the ensuing year: President, Dr. R. W. Lanning, Ste. Genevieve; vice president, Dr. J. A. Wilkins, St. Marys; secretary-treasurer, Dr. L. J. Birsner, Ste. Genevieve; delegate to state meeting, Dr. F. E. Hineh, alternate, Dr. G. M. Rutledge. The board of censors were appointed by the president.

No further business appearing, the society adjourned until the second Wednesday in January, 1917.

R. W. LANNING, M.D., Secretary.

### WEBSTER COUNTY MEDICAL SOCIETY

The annual meeting of the Webster County Medical Society was held in the office of Dr. J. R. Bruce, at Marshfield, Dec. 6, 1916. The meeting was called to order after the society had dinner at the Webster Hotel. Dr. T. S. Bruton was elected president pro tem, and Drs. E. M. Bailey, T. S. Bruton, J. S. Sayers, William A. Atkins, D. A. Williams, M. Highfill, E. H. Roberts, W. F. Schlicht and J. R. Bruce responded to roll call. The minutes of our last meeting held at Elkland were read and approved as was the report of the treasurer. Dr. W. F. Schlicht was elected to membership in our society.

Clinical cases were presented by several members and discussed by those present.

Election of officers for 1917 resulted as follows: Dr. T. S. Bruton, president; Dr. W. F. Schlicht, vice president; Dr. J. R. Bruce, secretary and treasurer; Dr. J. S. Sayers, delegate; Dr. E. H. Roberts, alternate; Dr. D. A. Williams, censor for three years; Drs. Bailey and Highfill holding over.

It was voted to have three papers at each of our meetings in the future and Drs. Atkins, Bruce and Bailey will have papers for our March meeting to be held at Seymour the third Wednesday in March.

Dues for 1917 were then collected from members present in order for our society to retain the top of the Roll of Honor which we have had the past two years in the State Society.

The meeting adjourned at 3:30 p. m.

J. R. BRUCE, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

MERCURIALIZED SERUM-MULFORD.—The following dosage forms of mercurialized serum-Mulford, described in New and Nonofficial Remedies, 1916, p. 192:

MERCURIALIZED SERUM-MULFORD, No. 5-A.—Each package contains one 8 Cc. graduated sterile glass syringe with sterile needle, containing the equivalent of 0.0055 Gm. ( $\frac{1}{2}$  grain) mercuric chloride.

MERCURIALIZED SERUM-MULFORD, No. 5-B.—Each package contains one 8 Cc. graduated sterile glass syringe with sterile needle, containing the equivalent of 0.011 Gm. ( $\frac{1}{2}$  grain) mercuric chloride.

MERCURIALIZED SERUM-MULFORD, No. 6-A.—Each package contains ten 8 Cc. graduated sterile glass syringes with sterile needle, each containing the equivalent of 0.0055 Gm. ( $\frac{1}{2}$  grain) mercuric chloride.

MERCURIALIZED SERUM-MULFORD, No. 6-B.—Each package contains ten 8 Cc. graduated sterile glass syringes with sterile needle, each containing the equivalent of 0.011 Gm. ( $\frac{1}{2}$  grain) mercuric chloride. H. K. Mulford Company, Philadelphia (*Jour. A. M. A.*, Dec. 9, 1916, p. 1759).

PERTUSSIS BACTERIN-MULFORD.—A pertussis bacillus vaccine (see N. N. R., 1916, p. 321). Pertussis Bacterin-Mulford is sold in packages of four syringes containing 50, 100, 200, and 400 million killed Bordet-Gengou bacilli. H. K. Mulford Company, Philadelphia (*Jour. A. M. A.*, Dec. 16, 1916, p. 1851).

### PROPAGANDA FOR REFORM

IRON CACODYLATE.—While manufacturers appear most ready to take advantage of the present interest in iron cacodylate by offering this in the form of ampules, etc., they have given little help to the A. M. A. Chemical Laboratory toward the establishment of standards for this arsenic compound. Manufacturers are ever ready to sell drugs of all sorts, but in view of the small demand for little used drugs, they cannot or will not safeguard the identity and purity of such drugs (*Jour. A. M. A.*, Nov. 25, 1916, p. 1593).

PLANT JUICE.—"Plant Juice" is a "patent medicine" which is said to yield an annual profit of \$90,000 to Col. Frank A. Dillingham of Cincinnati. The Milwaukee Health Department reports that, in addition to 20 per cent. alcohol, "Plant Juice" contains aloes, licorice with possibly a little *caseara sagrada* or senna. This nostrum is advertised as "beneficial" in anemic conditions, nervousness, sickness and debility, headache, backache, dyspepsia and various other ills (*Jour. A. M. A.*, Dec. 2, 1916, p. 1685).

DAKIN'S HYPOCHLORITE SOLUTION.—The following procedure is claimed to have superseded the previously published formulas: Stir 200 Gm. chlorinated lime into 5,000 Cc. ordinary water and let stand over night. Dissolve 100 Gm. anhydrous sodium carbonate and 80 Gm. sodium bicarbonate in 5,000 Cc. cold water and pour this into the chlorinated lime mixture, and shake for one minute. After one hour siphon off the clear liquid and filter it through paper. A portion of this must not become red if a little dry phenolphthalein is added to it (*Jour. A. M. A.*, Dec. 2, 1916, p. 1687).



**TOXINOL.**—Toxinol is a "syphilis remedy" marketed by the Hawes Chemical Co., Louisville, Ky. It is a shotgun mixture characteristic of the days when syphilis was treated with haphazard mixtures of iodides, mercury and vegetable "alteratives." The Council on Pharmacy and Chemistry has examined Toxinol and the claims made for it, and reports that Toxinol is ineligible for New and Nonofficial Remedies because it is an irrational combination of drugs, marketed under a name that is non-descriptive of its composition and with unwarranted and misleading claims (*Jour. A. M. A.*, Dec. 2, 1916, p. 1687).

**TOXICITY OF SALVARSAN.**—From the reports of O. S. Ormsby and J. H. Mitchell, A. M. Moody and J. D. Ellis in *The Journal A. M. A.*, Dec. 9, 1916, it would appear that some of the salvarsan recently on the market has been unusually toxic (*Jour. A. M. A.*, Dec. 9, 1916, p. 1764).

**MAYR'S WONDERFUL STOMACH REMEDY.**—More than a year ago the proprietor of Mayr's Wonderful Stomach Remedy pleaded guilty in the federal court to the charge that the claim that the nostrum was a cure for gallstones, appendicitis and all stomach, liver and intestinal diseases was false and fraudulent. Nearly a year later a placard over the store window of the Mayr establishment the following appears: "Mayr's Wonderful Stomach Remedy Is the Only Known Cure for All Stomach, Liver and Intestinal Complaints. One Dose Will Prove It." The federal Food and Drugs Act should have its scope extended so that all advertising for a product shall come under the purview of the Act (*Jour. A. M. A.*, Dec. 9, 1916, p. 1774).

**MORE MISBRANDED NOSTRUMS.**—The following nostrums were found to be sold with false and fraudulent therapeutic claims: E. K. Thompson's Barosma Compound was found to be a watery-alcoholic solution containing bromid of potassium 3.85 per cent., potassium acetate 2.6 per cent., extract of buchu and sugar 18.4 per cent. It was sold under the inferential claim that it was a cure for Bright's disease, inflammation of the kidneys, etc.—Sayman's Vegetable Liniment Compound, sold for the treatment of deafness, fever, ague and even sore nipples, toothache and chilblains, was found to be a hydro-alcoholic solution of camphor, chloroform, capsicum, oil sassafras, ammonia and plant extractive, and probably turpentine.—Knorr's Genuine Hien Fong Essence or Green Drops was found to contain 69.72 per cent. alcohol (by volume), 0.35 per cent. ether (by volume), 0.28 gm. nonvolatile matter per 100 Cc., flavored with oil of spearmint. It was said to be an excellent remedy for diseases of the stomach and bowels and many other ailments (*Jour. A. M. A.*, Dec. 9, 1916, p. 1775).

**ARSENOBENZOL (PHILADELPHIA POLYCLINIC).**—Dr. Schamberg explains that the Dermatologic Laboratory of the Philadelphia Polyclinic availed itself of the opportunity to supply their product when salvarsan was not obtainable. Having so served this purpose in the interest of humanity and the public health, the marketing of their product was discontinued when the German product became again available. The laboratory is not established for commercial purposes and could not afford to become embroiled in patent litigation which would no doubt be instituted by the owners of the salvarsan patent (*Jour. A. M. A.*, Dec. 9, 1916, p. 1776).

**SULFO-SELENE-WALKER.**—The New York *Tribune* explains that it was caught "napping" when it gave space to a discussion of Dr. C. H. Walker's cancer treatment, "Sulfo-Selene." It explains that, while there is probably no single false statement in the published interview self-sought by Dr. Walker, the

impression sought to be conveyed that Sulfo-Selene will cure cancer, rests on no such foundation of evidence as to justify a reputable and responsible physician in setting it forth in the public prints. The *Tribune* explains that Dr. Walker's preparation has failed to obtain that recognition which would have given it a scientific status, namely, recognition by the Council on Pharmacy and Chemistry (*Jour. A. M. A.*, Dec. 16, 1916, p. 1864).

**MORE MISBRANDED NOSTRUMS.**—The following "patent medicines" have been held misbranded under the federal Food and Drugs Act, chiefly because of false and unwarranted therapeutic claims. Mrs. Winslow's Soothing Syrup, declared to contain 5 per cent. alcohol and  $\frac{1}{10}$  grain morphine sulphate to each fluidounce together with oil of aniseed, caraway, coriander, jalap, senna and sugar syrup (as now marketed the preparation contains no opiate).—Johnson's Iodized Extract of Sarsaparilla found to be a simple vegetable preparation with only an appreciable amount of potassium iodide.—Matusow's Nulfe contains 51.8 per cent. sodium salicylate. An alkaloid, probably berberine, and emodin were present (*Jour. A. M. A.*, Dec. 16, 1916, p. 1865).

**BROMIN-IODIN COMPOUND.**—This preparation was submitted to the Council on Pharmacy and Chemistry with the following formula: "Iodin Gr. 1, Bromin Gr.  $\frac{1}{4}$ , Phosphorus Gr.  $\frac{1}{100}$ , Thymol Gr.  $\frac{3}{8}$ , Menthol Gr.  $\frac{3}{8}$ , Sterilized Oil fl. dr. 1." According to the promoters Bromin-Iodin Compound is "A Powerful Anti-Tubercular Agent for Hypodermic Use in Pulmonary and Laryngeal Tuberculosis . . ." The Council declared the preparation ineligible for New and Nonofficial Remedies because the "formula" was impossible if it is intended to indicate the composition of Bromin-Iodin Compound; and meaningless if it is intended to indicate the ingredients used in the manufacture; and also because there was no satisfactory evidence for its therapeutic efficiency (*Jour. A. M. A.*, Dec. 23, 1916, p. 1958).

**CASTROX.**—Castrox is a castor oil emulsion claimed to contain castor oil 50 per cent., glycerin 10 per cent., with water and emulsifying agents. It was said to be prepared by a "unique three-day process with special apparatus and is more than 'just an emulsion.' It is a MUTUAL emulsion, for the oil and aqueous solution have been united without 'forcing' . . ." The Council held Castrox to be an unnecessary modification of an established article, marketed under a proprietary name and with claims which give a false value to a simple castor oil emulsion, and therefore not admissible to New and Nonofficial Remedies (*Jour. A. M. A.*, Dec. 23, 1916, p. 1956).

**MORE MISBRANDED NOSTRUMS.**—The following "patent medicines" were found misbranded under the Food and Drugs Act in the main because unwarranted and false therapeutic claims were made for them: Smith's Kidney Remedy, found to be a hydro-alcoholic solution containing glycerin, potassium acetate, trace of alkaloid, laxative extractive plant drugs.—Hill's Syrup of Tar, Cod-Liver Oil Extract and Menthol, essentially a sweetened hydro-alcoholic solution containing small amounts of chloroform, menthol, morphine and tar; ipecac, tolu, cannabis indica and wild cherry were indicated; cod-liver oil was absent.—Mag-No Brand Liniment, essentially an aqueous solution of ammonia, flavored with sassafras oil and colored.—Radway's Sarsaparillian, essentially a watery-alcoholic solution of sugar, potassium iodid, arsenic, a trace of alkaloids and certain plant substances.—Dr. Shoop's Diphtheria Remedy, consisting of sugar syrup with a very small amount of soluble chromate, glycerin and salicylic acid.—Dr. Shoop's Preventics, a tablet containing a small amount of unidentified

vegetable extractive matter.—Hot Porous Plaster, essentially a capsicum plaster.—N. H. Downs' Vegetable Balsamic Elixir, a sweetened solution of opium, ipecac, glycerin, and small amounts of calcium, potassium, and iron compounds, flavored with anise.—Kopp's Baby's Friend, containing 8.5 per cent. alcohol and  $\frac{1}{4}$  grain morphin sulphate to the fluidounce.—Prof. Hoff's Prescription, formerly known as Hoff's Consumption Cure.—Dr. Haynes' Arabian Balsam, apparently a mixture of cotton seed oil, turpentine and oil of cumin.—Russia Salve, sold as a cure for conditions ranging from "cancers" to "mosquito bites" and from "swelled nose" to "ingrowing nails" (*Jour. A. M. A.*, Dec. 23, 1916, p. 1956-1957).

**LACTEOL.**—This appears to be a lactic acid ferment preparation. The advertising material is of the usual extravagant character. The preparation is made in Paris and, since the bacteria lactic acid ferment preparations are short lived, may be inactive by the time it is used here (*Jour. A. M. A.*, Dec. 23, 1916, p. 1959).

**SODIUM CACODYLATE IN SYPHILIS.**—While Nichols has shown that sodium cacodylate is worthless as a spirocheticide, it is still being used in the treatment of syphilis, and it is the essential constituent of venarsen, a proprietary syphilis remedy. As a result of extensive clinical trials, Dr. H. N. Cole concluded that sodium cacodylate has no spirocheticidal value. At the utmost it has perhaps a slight action on the papular and nodular syphilids, but in no case is this effect to be compared with that produced by mercury and potassium iodid. In cases of syphilis with mucous patches sodium cacodylate is worse than useless (*Jour. A. M. A.*, Dec. 30, 1916, p. 2012).

**TANRET'S PELLETERINE.**—The exact composition of Tanret's Pelletierine is not known, but is believed to be similar to the pelletierine tannate of the U. S. P. This is said to be a variable mixture of the tannates of four alkaloids of pomegranate. As only two of the alkaloids have tenifuge properties the activity of the different preparations varies with the proportion of these alkaloids which are present (*Jour. A. M. A.*, Dec. 30, 1916, p. 2030).

**O-DO-CURE.**—The A. M. A. Chemical Laboratory reports that a solution essentially similar to this "perspiration remedy" may be made thus: salicylic acid 1 grain, boric acid 30 grains, alcohol 3 fluidrams, perfume sufficient, water to make 1 fluidounce (*Jour. A. M. A.*, Dec. 30, 1916, p. 2030).

**MERCURIC BENZOATE.**—When mercuric benzoate is dissolved in sodium chloride solution for injection purposes a complex mercuric compound is produced in which the mercury is a part of the acid radical. It is safe to assume that the therapeutic effect of a given weight of mercury as mercury benzoate in a stated volume of sodium chloride solution will be the same as that of the same weight of mercury in the form of mercuric chloride in the same volume of sodium chloride solution (*Jour. A. M. A.*, Dec. 30, 1916, p. 2030).

**QUININE INJECTION.**—By taking proper precautions the number of cases of abscess formation and necrosis from the injection of quinine may be greatly reduced, but the danger of their occurrence cannot be entirely eliminated. For this reason all authorities agree that the administration of quinine by injection should be confined to the most urgent cases of pernicious malaria. The two most important precautions are, that the injection must be intramuscular and that the solution should be dilute—not stronger than 10 per cent. The best salts are quinine dihydrochloride and quinine and urea hydrochloride, (*Jour. A. M. A.*, Dec. 30, 1916, p. 2030).

**THE STATUS OF ANTIPNEUMOCOCCUS SERUM.**—The injection of the proper antipneumococcus serum in pneumonia caused by pneumococcus Type 1 is believed to be beneficial, but the serum treatment of pneumonia is still in the experimental stage. The pneumococci fall into various groups according to their immunologic relations and the first requisite for a rational use of the serum treatment of pneumonia is the determination of the particular type of the pneumococcus concerned in a given case (*Jour. A. M. A.*, Dec. 30, 1916, p. 2030).

## BOOK REVIEWS

**THE MEDICAL EPITOME SERIES. OBSTETRICS.** A manual for students and practitioners. By W. P. Manton, M.D., formerly Professor of Obstetrics and Clinical Gynecology, Detroit College of Medicine, Gynecologist to Harper Hospital and to Eastern and Northern Michigan Hospitals for the Insane. Lea & Febiger, Publishers, Philadelphia.

This is one of the epitomes written mostly for the senior student and for the practitioner to review for state board examinations. It is well written and up-to-date.

W. H. L.

**SURGERY, GYNECOLOGY AND OBSTETRICS, DECEMBER, 1916.**

This is the index number for Volume XXIII. It contains twelve original contributions. The leading article is an interesting discussion of "Gunshot Wounds of Peripheral Nerves," by Byron Stookey, A.M., M.D., of Los Angeles, Temporary Assistant to Lieut.-Col. Robert Jones, Inspector of Military Orthopedic Surgery, British Army. It is a highly instructive article with numerous illustrations based on experience of the author in the present European conflict.

**LABORATORY METHODS WITH SPECIAL REFERENCE TO THE NEEDS OF THE GENERAL PRACTITIONER.** By B. G. R. Williams, M.D., Member of Illinois State Medical Society, American Medical Association. Assisted by E. G. C. Williams, M.D., formerly Pathologist of Northern Michigan Hospital for the Insane, with an introduction by Victor C. Vaughan, M.D., LL.D., Dean of the Department of Medicine University of Michigan. St. Louis: C. V. Mosby Company.

The book contains eighteen chapters and devotes one chapter to each subject. It will be especially useful for the physician who in order to help make his diagnoses wishes to be thorough. It shows that with apparatus which costs but little one can do very good work. The book is adequately illustrated.

W. H. L.

**THE MEDICAL CLINICS OF CHICAGO, NOVEMBER, 1916.** W. B. Saunders Company, Philadelphia.

An illuminating paper from the clinic of Dr. Walter W. Hamburger of the Cook County Hospital is the leading article in this issue. It is illustrated with several fine Roentgen-ray pictures. The other articles are: Clinic of Dr. Isaac A. Abt, Infantile Paralysis. Clinic of Dr. Ralph C. Hamill, Acute Anterior Poliomyelitis. Clinic of Dr. Charles Louis Mix, Two Cases of Primary Pernicious Anemia. Contribution by Dr. William Allen Pusey, Some Cases of Eczema from External Irritation. Clinic of Dr. Frederick Tice, A Case Presenting Addison's Syndrome—Gangrene of the Lung. Clinic of Dr. Herman L. Kretschmer, The Treatment of Chronic Colon Pyelitis by Pelvic Lavage. Clinic of Dr. Charles Spencer Williamson, Polycystic Kidneys—A Case of Recurrent Endocarditis with Cerebral Embolism—An Atypical Case of Gout. Clinic of Dr. Frank Smithies, Cases Illustrating Spasm at the Cardia and Cardiospasm Associated with Diffuse Dilatation of the Esophagus.



**DISEASES OF THE SKIN AND THE ERUPTIVE FEVERS.** By Jay Frank Schamberg, A.B., M.D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine; Dermatologist to the Philadelphia General Hospital; Fellow of the College of Physicians of Philadelphia; Member of the American Dermatological Association. Fully illustrated. Third edition. Thoroughly revised. Philadelphia and London: W. B. Saunders Company.

That this splendid work has proven a popular and instructive book on diseases of the skin is evidenced by the fact that it has passed through its third edition in seven years and was reprinted three times previous to the revision of the copy before us. In this third edition the text has been revised so as to include the important advances made since the publication of the last edition. The prescriptions and doses of medicaments are given in both metric system and the troy system. A brief chapter on the luetin test in syphilis has been added, and the chapter on the therapy of syphilis has been rewritten. Rocky Mountain spotted fever is also considered in this edition.

**THE UNIVERSITY OF THE PHILIPPINES CATALOGUE, 1915-1916.**

This is a very illuminating volume for those who are interested in the development of the Philippines. The University of the Philippines was established by an act of the Philippine legislature in 1908, and is under the control of a board of regents comprised of the Secretary of Public Instruction, the Secretary of the Interior, the Director of Education, the Chairman of the Committee of Public Instruction of the Philippine Assembly, the President of the University and a Justice of the Supreme Court, and five additional members appointed by the Governor General.

The Philippine Medical School was established in 1905 and became the College of Medicine and Surgery of the University in 1910. In 1915 a course in dentistry was added to the College of Medicine and Surgery. Other departments of the university are: The School of Fine Arts, College of Agriculture, College of Veterinary Science, College of Liberal Arts, including a course in pharmacy and the school of education; College of Engineering, and College of Law.

The admission requirement for the College of Medicine and Surgery is a satisfactory completion of one year's college work in the College of Liberal Arts of the University of the Philippines or a school having equal standing; that is to say, the standard set by the Association of American Medical Colleges for schools in Class A. The course is five years with a sixth year of hospital work optional, except for those physicians who desire to enter the clinical branches of the government service in which case thirty-six weeks of satisfactory hospital service is required. In 1915 there were sixteen graduates from the medical college.

**CONSTIPATION, OBSTIPATION AND INTESTINAL STASIS.**

By Samuel Goodwin Gant, M.D., LL.D., Professor of Diseases of the Colon, Sigmoid Flexure, Rectum and Anus in the New York Post-Graduate Medical School and Hospital. Second edition, enlarged. Octavo of 584 pages, with 258 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

When a book reaches its second edition it has demonstrated that it has met a need, or at least has entered a field in which there is such a great need that any attempt to meet the need has caused a widespread purchase of the book attempting it.

The reviewer had some difficulty in holding himself to a consecutive perusal of the book because the highly calendered paper tired his eyes after a few minutes of reading. But he has read it and tried to ascertain its value.

The book treats of subjects of extreme interest to four-fifths of our people—for probably that many have difficulty in maintaining their intestinal tracts in good working order. The author makes general statements on all subjects treated and gives conclusions, but he fails to analyze scientifically the pathology and physiology of the pathological conditions or to present credible data on the results of the various methods of treatment discussed. For example, on the matter of pericolic membranes he fails to discuss the researches of Hertzler *et al.* on peritoneal adhesions and membranes; nor does he show the end-results of the various methods of treatment. He speaks of Kellogg's operation for incompetent ileocecal valves but neglects to inform us what the results have been. He fails also to show the results of the late studies of the vagotonic and sympathetic nervous systems on constipation and diarrhea. He does not analyze food values sufficiently to enable the reader to work out practical dietaries.

If the value of a physician's service is to be judged by his ability to make his patients independent of the physician, then the teaching of this book would be of little help to the conscientious scientific physician.

G. H. H.

**MOSQUITO CONTROL IN PANAMA, THE ERADICATION OF MALARIA AND YELLOW FEVER IN CUBA AND PANAMA.** By Joseph A. LePrince, C.E., A.M., Chief Sanitary Inspector, Isthmian Canal Commission, 1904-1914, and A. J. Orenstein, M.D., Assistant Chief Sanitary Inspector, Isthmian Canal Commission. With an Introduction by L. O. Howard, LL.D., Entomologist and Chief, Bureau of Entomology, United States Department of Agriculture. With 100 illustrations. G. P. Putnam's Sons, New York and London, 1916. Price, \$2.50.

There is no more fascinating story in the field of preventive medicine than the history of mosquito control and the eradication of malaria and yellow fever in the tropics. It is a tribute to American medicine that will live through the ages, that the relation of the mosquito to malaria and yellow fever was discovered by American physicians, some of whom gave their lives to prove the theory that others might be saved; and that their fellows found adequate means of controlling mosquitoes so that hitherto uninhabitable parts of the globe have been transformed into the most salubrious climes where the white man can live and labor in comfort. How this transformation was accomplished is set forth in this comprehensive volume. That the authors entertained no doubt of their ability to succeed under the guiding hand of that master sanitarian, Gen. William C. Gorgas, is entertainingly though succinctly announced in the preface by Dr. L. O. Howard. Dr. Howard was anxious to obtain specimens of all Panama mosquitoes for naming so he asked General Gorgas to see that he was supplied with these specimens. The general said, "I will assign Mr. LePrince to see that it is done." Mr. LePrince remarked, "I will have to do it soon, doctor, for in a year or so there will be no mosquitoes there." Such is the spirit that conquers the insuperable. How this great task was done and how mosquitoes can be controlled in any locality are vividly described. With such evidence extant of successful measures to prevent disease conveyed by these insects any community that harbors mosquitoes in this enlightened age will come to be regarded as criminally negligent, if indeed it can today escape such charge.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee  
ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

FEBRUARY, 1917

Number 2

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION COMMITTEE { W. H. BREUER, M.D., Chairman  
S. P. CHILD, M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### A CASE OF THE GAUCHER TYPE OF SPLENOMEGALY WITH SPLENECTOMY \*

BORDEN S. VEEDER, M.D.,  
AND  
MALVERN B. CLOPTON, M.D.  
From St. Louis Children's Hospital,  
ST. LOUIS

Gaucher's disease, or "large cell splenomegaly," is a very rare disease. In January, 1916, Knox, Wohl and Schmeisser collected sixteen proved cases from literature and added two cases in infants. In addition to these, two cases from the Mayo clinic are referred to by other authors and reported by Wilson but without details. Since Knox's paper a case has been briefly reported by Bernstein and another by Bruce and Mabec.

Summaries of the literature and discussions of the pathology of the disease will be found in papers by Mandlebaum, Knox, and Reuben to which the reader is referred. Because of the rarity of the disease the following case, which shows a number of interesting features, is placed on record.

#### CASE HISTORY

On May 10, 1915—seventeen months ago—a boy then aged 4½ years, was brought to the St. Louis Children's Hospital by his physician. The boy was an only child and his father had died a couple of years previously from tuberculosis. Outside of this the family history was negative and nothing resembling a similar condition was known of in the child's ancestry.

The boy's early history was negative. He had been nursed on the breast for seven months and then after an acute intestinal upset had been weaned. Five months before coming to the hospital he had pneumonia and a month later a "relapse." Except for this the patient had always been well and had escaped the infectious diseases of childhood. Following the

pneumonia the mother noticed that the patient's abdomen seemed to be getting larger although, she states, "it had always been large." A physician at this time told the mother that the enlargement was due to "a large spleen." Some time after the pneumonia it was noticed that the urine was very dark and this continued up to the time of admission. The child also developed a tendency to nose bleed, and some two weeks before admission purplish spots appeared on the legs and abdomen. One of the most noticeable symptoms to the parents was a marked progressing lassitude, so marked that at the time the boy was admitted he would no longer play, but moped about the house tired out the entire time. The stools had been regular and had never had a tarry appearance or shown fresh blood. The appetite had been good and there had been no vomiting.

Some time before admission the child had been given anti-malarial treatment and more recently calcium salts and iron for the blood condition.

*Physical Examination* (abstract).—The patient is a well nourished boy with a strikingly prominent abdomen. Circumference of head, 51 cm.; of the chest, 55 cm., and of the abdomen, 65 cm. Temperature, pulse and respiration normal.

The skin is pale, but moist and elastic and the subcutaneous tissues abundant. Over the lower abdomen, thighs, legs and feet (including soles) a number of purplish macules are present, varying from pin point to 0.8 cm. diameter in size. These do not blanch on pressure.

Head and mucous membranes negative. There is no yellowish discoloration or thickening of the conjunctiva present.

Thorax well formed. There is an area of dullness in thymic region extending from 1 cm. to right to 4 cm. to left of sternum in the second interspace. Small area of impaired resonance positively between spine and scapula on right side. Heart dullness 0.5 cm. outside right sternal border (fourth interspace) to 1 cm. outside left nipple line. Sounds of normal quality and rhythm. Breath sounds vesicular.

Abdomen shows marked enlargement. With child on back it extends high above level of ribs. The liver dullness extends from the fourth interspace to 6.5 cm. below the costal margin in right nipple line. Firm, smooth, and edge plainly felt. The entire left half of the abdomen is filled with a hard, firm mass with a smooth surface, which fits tightly against the abdominal wall. It is continuous with the area of normal splenic dullness above and extends down into the pelvis. The anterior inner edge is firm and rather sharp and corresponds to a line drawn from the left nipple to the symphysis pubis. It is notched at about the level of the umbilicus. Percussion over the mass gives a flat note. The mass has a slight lateral movement but does not move with respiration.

\* Shown before the Central States Pediatric Society, St. Louis, Oct. 18, 1916.

No fluid present; there is a small umbilical hernia. (See photograph of patient.)

Lymphatic glands are palpable in neck, axilla and groins, but nowhere larger than large shot. Genitalia and extremities negative. Urine clear, acid, specific gravity 1.018, faint trace albumin. Few white blood cells, no casts.

Blood: hemoglobin 55 per cent., red blood cells 3,780,000, white blood cells 4,400, differential neutrophils 53 per cent., eosinophils 0, small mononuclears 41.5 per cent., large mononuclears and transitionals 5.5 per cent. No normoblasts, myelocytes, or other abnormal cells observed. Malarial plasmodia negative. Coagulation time slightly lengthened.

Tuberculin (Von Pirquet and  $\frac{1}{40}$  mg., intradermally) negative. Wassermann reaction negative.

From the clinical picture, age of the patient and blood picture, a clinical diagnosis of Gaucher's disease was made, and the parents advised that the only hope of recovery lay in a splenectomy. The blood picture ruled out leukemia. Syphilis and tuberculosis were excluded by laboratory tests. The child was too old for von Jaksch's and, moreover, the blood picture was different. Banti's disease in an early stage could not be excluded but the age of the patient, the marked leukopenia and the marked enlargement of the liver made Gaucher seem the more probable condition. Moreover, the pathological condition was obviously advanced.

the child has played and seemed as a normal child. There has been no gastric nor intestinal disturbance and no particular susceptibility to infections following the operation. The boy has grown four inches and his weight increased. Purpura has never reappeared.

*Physical Examination.*—Circumference of head 52 cm., of the chest 56 cm., and of the abdomen 54 cm. Nothing abnormal noted except the enlargement of the liver which extends from the fourth rib to 7 cm. below the costal margin in right nipple line. (Same size as at time of operation.) The lymphatic glands are palpable but no larger. In general the boy is in splendid physical condition.

This same picture presents itself at the present time—October, 1916—seventeen months after operation.

*Pathological Report.*—The spleen was examined in the laboratory of surgical pathology and the clinical diagnosis of Gaucher's disease confirmed.

The tissue received in the laboratory consists of the spleen, one end of which has been removed. Measurement: 20 cm. long, 13 cm. wide. Weight, 800 grams. (Operator reported that the size of the spleen just after its removal was 10 by 7 inches.) Along the anterior edge there are several small indentations. Near the posterior margin there is a groove  $2\frac{1}{2}$  cm. deep and 5 cm. in length. The surface of the spleen is smooth, the capsule is thin.

DIFFERENTIAL (500 CELLS)

	R. B. C.	Hb. %	W. B. C.	Polynuclear					
				N.	E.	B.	S. M.	L. M.	T.
5/11/15	3,780,000	55	4,400	53	0	0	41.5	5.5	
5/12/15	.....	..	4,800						
Splenectomy									
5/14/15	5,400,000	55	19,000	70	5	0	9	10	6
5/15/15	.....	..	31,000						
5/20/15	6,200,000	55	34,000	66	4.5	0	7.5	10.2	8.2
5/28/15	5,200,000	64	36,000	72	6	0	6.2	8	6
3/13/16	4,800,000	90	33,000	60	5.8	0.8	25	.....	8.3

The parents' consent was obtained for a splenectomy. It was decided to operate at once as the purpuric condition was becoming worse and so on May 12, two days after admission, this was done by Dr. Clopton.

The operative note is as follows: Incision six inches long through middle of left rectus. Spleen easily delivered through the opening and pedicle was found fanned out and about four inches broad with the large vessels in the center. These were ligated separately. The spleen was about ten inches long and six inches in diameter and marked with numerous lobulations. There were no adhesions. The liver was large but showed no thickening of the capsule nor irregularity of the surface and was, except for its size, normal in appearance. A few small lymph nodes could be felt in the mesentery. No blood was lost during the operation. Ether anesthesia rather poorly taken. Slight nausea and vomiting after return to ward. Time of operation, thirty minutes.

The purpuric eruption increased for a few days following the operation and the patient ran a slight temperature. The general condition then began to improve rapidly and on May 26 the patient was discharged from the hospital.

He has been followed closely since then and examinations made from time to time. The notes made March 13, 1916, ten months after operation, are as follows:

Since last seen has been in excellent health. The lassitude which was so marked for months before operation rapidly disappeared and for several months

There is no evidence of perisplenitis. The surface is glistening and a reddish gray in color. On section the cut surface has a red mottled appearance. There are numerous irregular, oval, dark red spots  $\frac{1}{2}$  cm. in diameter, in the center of which is a gray area. Surrounding these dark spots the tissue is made up of grayish red material throughout which are red pinpoint areas. There are no cysts, no areas of degeneration.

*Microscopical Pathology.*—The microscopical picture corresponds with that seen in splenomegaly of the Gaucher type. There is very little normal splenic tissue to be seen. The characteristic picture is the presence of large spaces filled with large pale staining endothelial-like cells. The walls of these spaces are formed by thin septa of connective tissue. The large pale cells vary from round to oval. The cytoplasm stains with eosin and the nuclei are small in proportion to the cytoplasm. The Malpighian bodies are relatively normal.

At the time of operation a small portion of the spleen was removed and sent to Dr. Bunting for bacteriological examination. He reports cultures as sterile.

Certain points in connection with our case are of special interest.

*Age.*—About one-third of the reported cases are in early childhood. The disease apparently has a more rapid and severe course in children

than in adults. Niemann's case and Knox's two cases in infants were more acute in character than chronic. We do not know how long our patient had had a large spleen—some six months at least before admission—but when seen by us he was in a serious condition and we know the progress of the disease had been rapid during the four months previous to the splenectomy.

*Family History.*—A number of the cases reported have been in brothers and sisters and there seems to be a familial character in the etiology. Our case was an only (first) child. The father of the boy was dead, as noted in the history, and the mother had remarried before this case came under our observation. No children have been born as yet to the second mar-

riage. Subsequent issue might throw some light on the etiology as regards the familial character of the disease.

*Blood.*—Numerous blood examinations were made in the case and these we have tabulated as they show several interesting features. First, the marked leukopenia before the splenectomy which is of diagnostic importance. Following the splenectomy there was a rapid rise in the number of white cells which is the normal curve of the blood picture following splenectomy, but it is somewhat unusual to have this persist for as long a time as it has done in our case. The hemoglobin rose fairly rapidly following the operation, with the rapid improvement in the patient's condition and the disappearance of the purpura. A polycythemia also developed following splenectomy.

*Splenectomy.*—Gaucher from the standpoint of splenectomy has been particularly discussed by Erdman and Moorhead. Knox lists nine cases upon which splenectomy has been performed and in addition the two cases of Wilson from the Mayo clinic were operated upon. Bernstein's case was also operated upon. Three cases died postoperative and the others are reported living as follows: 1 at 41 days, 1 at 16 weeks, 3 at 5 months, 1 at 16 months. Our case is living and in good health, 17 months after operation. Our case makes 13 operative cases with a mortality of 3, or 23 per cent. We have no hesitation in saying that our case would have died very soon without operation. In progressing cases this seems the rational therapy.

500 South Kingshighway—Humboldt Building.

#### REFERENCES

- Knox, Wohl, and Schmeisser: Johns Hopkins Hospital Bulletin, 1916, xxvii, 299.  
Mandelbaum: Jour. Exper. Med., 1912, xvi.  
Reuben: Am. Jour. Dis. Child., 1912.  
Erdman and Moorhead: Am. Jour. Med. Sciences, 1914, cxvii, 213.  
Bernstein: Jour. Am. Med. Assoc., 1915, lxvi, 1907.  
Bruce and Mabce: Jour. Canad. Med. Assoc., 1915, v, 10.

### THE MEDICAL SERVICE OF LIFE INSURANCE \*

S. B. SCHOLZ, JR., M.D.

Medical Referee, The Equitable Life Assurance Society

ST. LOUIS

This paper is rather difficult because of the varied service given by our profession to life insurance companies. The thirty-eight million life insurance policies in force in the United States immediately convey some little idea of the extent of this service, for each policy represents some form of medical examination or service. (These policies aggregate twenty billions of insurance, an average of \$932 per family.)

We think of life insurance as one of our comparatively recent businesses; this is true, but the Greeks and Romans before the Christian era conducted guilds for the mutual protection of sick and infirm members. It is most interesting to know that some required certain physical examinations.

The Anglo-Saxons before and after the Norman invasion formed guilds providing for sick

\* Read at the Fifty-Ninth Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 8-10, 1916.





benefits, burial insurance, indemnity in case of murder, etc.

The Equitable of London was founded in 1762 and from its inception required a health certificate carrying two signatures, one that of a physician. It was not until 1820 that regular medical examinations were required.

The corporation for the relief of poor and distressed widows and children of Presbyterian ministers was the first American life company. It was established in 1759. This and all other American companies have required medical examinations of applicants.

The examinations previous to about 1860 were not exacting; no discretion seems to have been exercised in the selection of the examiner and the applicant's personal condition was apparently the only element considered.

At the present time American companies exercise much care in selecting an examining physician, requiring graduates of recognized medical colleges (preferably of collegiate training), who have had hospital experience, are of good morals, habits, professional standing, etc. The examination requirements are rigid and will be referred to later.

As you all know, the medical directors of a company desire from the examiner a report of such a nature that a definite conclusion can be drawn from its study as to whether or not the subject who was examined conforms to the selection average of the company and if not how far he departs from it.

Reports of a murmur, some râles, indigestion, biliousness, et cetera, are meaningless. In reporting an abnormal condition a brief description of it should be supplied as well as a more or less detailed history. The applicant may report a nervous breakdown, pain in the stomach, etc., which may or may not on inquiry be of significance. Medical directors cannot, of course, act on cases giving incomplete data. To illustrate, the location, time, character, transmission of a cardiac murmur is necessary as well as data concerning hypertrophy, whether or not the heart has ever been in a state of decompensation; the diastolic is interesting and the systolic blood pressure is essential. The examiner's diagnosis is helpful and of value in connection with any abnormal condition referred to in the report.

A volume could be written on a life insurance examiner's work and duties. A simple successful plan to follow after completing a report is to try and place one's self in the reviewer's position, read carefully the report and try to understand it. Often it is extenuated, details are added and the whole complexion of the risk changed.

The most competent examiner will often report a subject suitable for insurance and some time later be shocked and feel slighted

to learn the company acted unfavorably on the applicant. Green mentions a series of 1803 cases, only 397 of which were declined by the examiner.

A subject of middle age, heavy of physique, with an abdominal measurement an inch or more greater than his maximum chest measurement, slightly plethoric, but of clean habits, active in his business, may be recommended first-class by an examiner, but the medical director acting on this individual knows if he accepts for insurance a build of this kind he is in error, because the tabulated, actual experience of his and many other companies show these men as a class do not live the expected length of life.

Alcoholic or other vicious habits, questionable morals, lack of financial worth as compared to the amount of insurance applied for, no pecuniary value of the applicant to the beneficiary, occupation, environment and other factors of which an examiner may have no knowledge or understanding may decline a physically perfect subject.

It occasionally happens that an examiner will without complete information take exception to the action of an approving medical officer, criticize him and feel rather disgruntled because his report was not final; this you will agree is an unfortunate viewpoint and often impairs an examiner's efficiency. The medical director obviously will accept every risk he safely can, knowledge of his specialty and actuarial statistics prevent, except in a very small percentage, mistakes in judgment.

Life insurance is based on the law of average which, when applied to the duration of human life, is called the law of mortality. The mortality tables are the result of the "Bills of Mortality," first published in 1603, and which were caused by the Great Plague. Ages were not included in these "Bills of Mortality" until 1728. Curiously, the study of these tables for the purpose of learning the average duration of life was probably because of the possibilities of the establishment of various forms of gambling. For example, if the odds on the probability that a person aged 40 would live for ten years, by reference to Halley's table (the first mortality table largely used), one would find of 545 people living when 40 years old, 99 would die in the coming decade, the bet would naturally be 346 to 99 that the individual would die.

C. Babbage, an actuarial authority of a century ago, said, "Nothing is more proverbially uncertain than the duration of human life when the maxim is applied to an individual, but there are few things less subject to fluctuation than the average of life in a multitude of individuals."

This uncertainty of the individual life and

the laws of mortality make life insurance possible, necessary and safe.

Mortality tables were first compiled from the unreliable records of deaths of certain towns. The most complete tables are those of the actual experience covering a thirty year period of some sixty English companies. The mortality tables used by most American companies are based on the first fifteen years' experience of the oldest New York company. This tabulation is called the American Experience Table of Mortality and was constructed, I believe, from data collected on 100,000 normally situated persons who had completed their tenth year. The number of people dying each year is given for each year of life, therefore deductions may be easily made from it for premiums for all ages.

Reference has been previously made to the fact that a medical director desires from an examiner sufficient information to determine whether an applicant conforms to the selective average of his company; if he does the risk is approved. Should the individual not conform to the company's average requirements, exact knowledge of the abnormal element is necessary so a determination of his length of life may be made. It follows that extenuated complete details of any abnormal condition found by an examiner should be covered in his report or in a letter to the medical directors. Most of the American life companies were guided, until a few years ago, in the selection of their business by their own past experience.

Very complete statistics (the Medico-Actuarial tables) have recently been published of the combined experience from 1885 to 1909 of forty-three of the larger companies. Their tables are from applicants examined for policies and issued at the standard rates of the companies; no impaired risks are included.

As previous to the publication of these tables companies were largely guided by their own experience or the judgment of their medical men, there resulted a wide discrepancy in the selection of risks caused by the different geographic, social, racial, economic distribution and condition of the applicants of the various organizations. Some companies secured most of their business from cities where the medical examinations were probably closer. Other companies' business was principally from the agriculture districts where examinations were not so exacting but the average length of life probably longer.

In a few years the selection approval of a risk by the various companies will probably be more uniform, for most companies will adopt the tables of the Medico-Actuarial investigations.

At present a very few companies accept only lives conforming to their established standard; others reject certain classes, as impaired hearts,

lungs, kidneys, certain family or personal histories, etc. The majority estimate from tabulations the shorting of the normal expectancy of life caused by an impairment. By adding a certain number of years to the true age of the applicant and charging the premium for the advanced age or fixing an extra mortality rate and adding it to the premium of the true age of the applicant. Several of the companies limit the percentage mortality charge to 100 per cent.; others carry it to 150 per cent. or even 200 per cent.

A few of the findings of this Medico-Actuarial investigation are briefly quoted as:

Thirty per cent. overweight; ages past 40 gave a 50 per cent. extra mortality.

The mortality of spinsters was less than men, while the married women mortality was 50 per cent. greater than from spinsters.

Twenty-two thousand colored men had a 47 per cent. higher mortality than caucasian.

Habits as to alcohol, one excess or more, the last within two years of application, shows a 174 per cent. ratio of actual to expected deaths.

One attack of pleurisy other than purulent between two and five years prior to application gave a 146 per cent. mortality.

Acute articular rheumatism, one attack within two years of application shows a 120 per cent. mortality.

Death rates of seven southern states (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi and Texas), were higher than the standard mortality. Some of the causes as compared to the standard: Typhoid and enteritis, one and one-half times greater; malaria, about seven times larger; the death rate from pulmonary tuberculosis and nephritis were found slightly in excess of the standard, while accidental deaths were distinctly above the standard.

Medical directors experienced in the past great difficulties in arriving at conclusions as to reported abnormal arterial tensions. This because an examiner's judgment or tension could not definitely or satisfactorily be determined. They long recognized the loss of accurate general knowledge of the circulation systems of their applicants as evidenced by blood pressures and were quick to avail themselves of the diagnostic help from blood pressures.

I believe the company of which J. W. Fisher, M.D., is medical director was the first (1906) to experiment with blood pressures. I quote in part from the doctor's excellent Wisconsin State Medical Society paper of last fall.

"Prior to 1907 with digital determination of arterial tension a fraction of 1 per cent. of applicants were refused insurance because of high tension. At the present time about 6½ per cent. of all cases rejected have high arterial tension and in more than half of these the



examiners discovered no impairment which would account for it. This demonstrates and the records of the company show that many applicants who apply for insurance and who suppose they are in perfect health and normal in every respect have a high blood pressure while presenting no symptoms or pathological changes discoverable by our present methods of diagnosis. While it is true and our records show that an apparently healthy person may carry a high blood pressure for a number of years without any discoverable pathological changes to account for this important diagnostic symptom, there can be no question, and these statistics prove beyond a doubt, that if the cause of the impairment is not discovered and removed, premature death will result in a very large per cent. of such cases."

Actual experience of Dr. Fisher's company shows 2,635 accepted risks, ages 40 to 60, giving an average pressure of 142 mm. Hg, with a mortality of 93.16 per cent.; 392 rejected subjects with no impairments other than an abnormal blood pressure (average 170 mm.) in three years, had a mortality of 127 per cent., which is 47 per cent. above the average mortality of the company. Another group of 288 rejected applicants, declined because of abnormal arterial tension at the time of examinations and having one or more other impairments, the mortality was 302 per cent., almost four times the company's mortality average for the same period and age. These brief references based on accepted and declined applicants are conclusive, I believe, of the value of sphygmomanometry.

Of the life companies in the United States I know of but two that do not insist upon blood pressures. Requirements vary; some medical directors wish blood pressures in all cases examined, others in only those applicants applying for a certain amount of insurance, some wish blood pressures on subjects past age 35 or 40 only, another group of companies insist on blood pressures of all applicants giving histories of heart or kidney lesions, nervous disease, syphilis, rheumatism, etc.

Less than four years ago in the conservation propaganda so popular in this age, some life companies considered the conservation of their policy holders, wisely concluding that if a life was worthy of insurance it was likewise worthy of other motives than the ones of mutual protection, monetary assets, the usual moral obligations of a company to the insured, etc.

The object desired is the prolonging of the life of the insured; this of course could only be accomplished by the early discovery of the symptoms of disease. To accomplish this end free health examinations are offered policy holders, or if the insured does not wish a

complete physical examination he may elect a microscopical and chemical urinal examination.

Some few companies have inaugurated this conservation, free from expense, policy holders' health examination privilege. The examination report is made by a local examiner in some instances. Another system is examinations by salaried physicians of the company's medical department located in the larger cities.

All companies, if an impairment is reported by the examiner, advise the policy holder of the condition, suggesting that he immediately place himself under the care of his physician, and if he will supply his name the medical directors will report in full the abnormal conditions found by the examiner. To indicate the possibilities of the service, one company tabulated 1,154 individuals examined, of whom 68.37 per cent. were advised to place themselves under medical care; 4.25 per cent. had very serious impairments. F. C. Wells, M.D., recently reported 2,032 of these health examinations of policy holders of his company, all but 281 less than age 60; 65 per cent. of the group the examiners found impaired. These statements are startling and clearly indicate the possibilities of this service, but should be considered with the thought that those who feel they are not healthy are the ones who most quickly take advantage of the examinations.

This good work has just commenced. We will all in the years to come see the benefits from it and I hope be helpful in reducing that annual American death rate of about 300,000 lives dying from preventable diseases.

I cannot take time to detail the medical service in connection with accident, fraternal, assessment, industrial, group, social or state insurance. One of the largest American industrial insurance companies maintains for its policy holders a well organized, competent visiting nurse organization. Several fraternal companies have excellently equipped sanatoriums for members who develop tuberculosis. Wisconsin and Massachusetts offer state insurance. Some European powers force certain of their citizens to insure in the insurance department of the government, even providing medical attention, nurses, medicines, hospitals and food for incapacitated persons entitled to the benefits of the insurance.

One government in its national insurance act even included the teaching of new occupations to those prevented by disease or accident from following their chosen work. This government has established hospitals, etc., which are operated under the insurance act and for many years have followed closely, through the Insurance Bureau, an active crusade against disease, inaugurated better sanitation, improved housing of members, etc.

We do not appreciate the extent of our service



to insurance, nor the possibilities of it. I believe the results of insurance as developed by some of the European countries are so well defined and beneficial that during the next fifty years every American physician will be more or less actively engaged in some well defined work caused by the insurance features granted or required by the companies, corporations, states or the central government. Also I can easily imagine our medical schools giving non-elective courses on life insurance medical service, as many of the American universities are at present offering courses on life insurance as a business.

Equitable Building.

### THE PHYSICAL PHENOMENA IN PLEURAL EFFUSIONS\*

J. CURTIS LYTER, M.D.  
ST. LOUIS

Since this paper is intended to deal only with the physical phenomena usually encountered in the various types of pleural effusions, there will be no effort made toward directing attention to the fact that the onset of a moist pleurisy may be either very insidious and practically unnoticed by the patient, or very stormy, accompanied by chills, fever, severe thoracic pain and dyspnea.

Neither will there be any physical distinction made between a purulent and serous pleurisy. The blood examination usually clears up this point. If the moist pleurisies were all typical in their physical manifestations, there could be no possible error in their diagnosis.

Unfortunately, a great many of the moist pleurisies are atypical in their manifestations, consequently offering some of the most difficult diagnostic problems. For instance, the typical physical phenomena in a moist pleurisy where the effusion is free within the chest and is approximately 1,500 c.c. in amount, are as follow:

Inspection of this chest reveals a greatly diminished respiratory excursion of the affected side, with a noticeable increase in the volume of the same side. I cannot, however, agree with those who assert that the intercostal spaces bulge markedly outward in massive pleurisies. Palpation of the chest in the typical case reveals a diminished respiratory excursion, an absence of tactile fremitus and a loss of the normal resiliency of the thoracic wall overlying the effusion. Percussion reveals the upper level of the fluid and the condition of the lung above this level. Skoda was the first to describe a hyperresonant note containing an element of tympany immediately above the level of the effusion. This

note is quite probably due to an emphysema of that portion of the lung lying immediately above the effusion. The upper line of the effusion represents a somewhat S-shaped line extending from the vertebra to the sternum. This line can be demonstrated by percussing the chest with the patient in the upright position. By percussion we also recognize displacements of organs adjacent to the pleural cavity affected; as, for instance, displacement of the heart to the right in left pleural effusions or to the left in right pleural effusions and displacement of the liver downward in right pleural effusions.

Personally, I have never seen the spleen displaced by a pleural effusion. Percussion also enables us to determine the obliteration of Traube's semilunary space in left-sided effusions and in outlining Grocco's paravertebral triangle. Over the effusion, the percussion note is flat as distinguished from the wooden dullness seen in pneumonia. Percussion on the opposite chest usually reveals a hyperresonant note due to a compensatory emphysema of the unaffected lung.

On auscultation, we are able to verify the emphysema of the unaffected lung, also the emphysema of that portion of the affected lung which lies above the effusion. Over the effusion the respiratory sounds are absent or greatly diminished, while on deep inspiration we may hear distant moist râles. The spoken voice sounds are either absent or greatly diminished, and the same is true of the whispered voice sounds.

The foregoing are the physical signs as encountered in what we might call a typical moist pleurisy. However, if one is sufficiently fortunate to see a large number of pleural effusions, he realizes that a great percentage of the moist pleurisies do not give the typical physical manifestations. The reason for the physical signs thus deviating from the typical are: 1. Massive quantities of fluid instead of the average 1,000 c.c. or 2,000 c.c. In this case the fluid is under extreme tension and acts as a good conduction media for the breath, spoken voice and whispered voice sounds, giving auscultatory findings characteristic of pneumonic consolidation. A case demonstrating these changes will be detailed shortly. 2. Pathologic changes in the pleura itself, either as dense adhesions localizing the fluid in an atypical manner, the so-called encysted pleurisies, or adhesions between the parietal and visceral pleurae over a pulmonary abscess, rendering it impossible to say whether the abscess is within the lung tissue itself or within the pleural cavity. Then, there is the chronic hyperplastic pleura, as found in chronic pleural tuberculosis. This condition simulates very closely a pleural effusion, and a differential diagnosis can sometimes only be made by combining a careful physical examination, exploratory puncture and roentgenography. One

\* Read at the Annual Meeting of the Linton District Medical Society, Mexico, Mo., May 2, 1916.

of the most frequent deviations from the typical physical phenomena is the atypical auscultatory findings as demonstrated by the following case:

A man 38 years of age entered the St. Louis City Hospital complaining of a pain in the limbs and a tired feeling in the chest during the past two months. Physical examination revealed an absence of the respiratory excursion of the left chest, a displacement of the heart to the right of the sternum, a flat note and an absence of tactile fremitus over the entire left chest. Upon auscultation the breathing over the entire left chest was distinctly tubular, simulating a pneumonia. The spoken voice and whispered voice-sounds were greatly increased.

The auscultatory phenomena in this case might lead one not familiar with this type of effusion to make a diagnosis of a consolidation of the entire left lung. The explanation usually given for these atypical auscultatory findings is the tension of the effusion in the thoracic cavity. Where the fluid is under high tension, as it was in this case, instead of having an absence of respiratory sounds, whispered voice and spoken voice sounds, we have an increase in each of them, because fluid under high tension offers a better conduction media than a series of air chambers as represented by normal lung. Again, the fluid coming immediately in contact with the trachea, receives the intense vibration from the trachea instead of the weaker vibration from the smaller bronchi. The diagnosis of the above case was verified by exploratory<sup>2</sup> puncture and fluoroscopic examination.

Another deviation from the typical physical signs is found in those cases where the fluid assumes an abnormal position. This is exemplified by the following case:

A patient, aged 63, entered the St. Louis City Hospital with a history that while he was standing on the street he was suddenly seized with most severe dyspnea, was unable to walk and was brought to the hospital. He gave no history of any previous illness. Physical examination revealed an area of dullness extending from the fourth thoracic vertebra to the left midaxillary line at the fourth rib, then extending almost perpendicularly downward to the left costal margin. Over this area there was a flat note, an absence of tactile fremitus, absence of respiratory, spoken voice and whispered voice-sounds. The remainder of the left chest was practically negative to physical examination. The right lung was in an extreme state of emphysema, so that the lower margin entirely filled up the costophrenic angle. The physical findings in the left chest in this case could be explained by a tumor, echinococcus cyst, emphysema or hemothorax resulting from a ruptured aortic aneurysm or by encysted fluid. An exploration of the left chest revealed the presence of an effusion due to tuberculous pleurisy. This was also verified by fluoroscopic examination. The peculiar position of this fluid was unquestionably due to pleural adhesions.

A marked feature of this case was the sudden onset of dyspnea without the patient realizing that there was a fluid in the left chest. The suddenness of the onset caused the writer to consider most seriously the possibility of a ruptured aortic aneurysm producing a left-sided

hemathorax. Evidently the right lung was able to compensate for the deficient work of the left lung up to a certain point, and then suddenly gave away and the extreme dyspnea was the result of an acute right-sided pulmonary emphysema.

One of the most frequent conditions existing within the chest to cause confusion in the definite interpretation of the physical signs usually found in pleural effusions, is hyperplasia of the pleura whereby the parietal pleura especially, and most frequently also the visceral pleura, becomes very much thickened, thereby not only interfering with the normal respiratory excursion of the affected lung, but giving the percussion and auscultatory phenomena observed in a typical effusion. A case exemplifying a chronic tubercular hyperplasia of the pleura is as follows:

A man, aged 47 years, complaining of dyspnea, right thoracic pain and cough lasting three months, came under my observation. Upon physical examination the right chest from the fifth thoracic vertebra posteriorly and from the fourth rib anteriorly, to the costal margin, revealed a decrease in the respiratory excursion, an absence of tactile fremitus, a loss of the normal resiliency, whispered and spoken voice-sounds and a dull note upon percussion. This represents practically the physical signs encountered in the typical right-sided effusion. A tentative diagnosis of a right-sided effusion was made and an exploring needle introduced between the eighth and ninth ribs in the scapular line. No fluid was obtained and on roentgenographic examination the physical signs were found to be due to a hyperplasia of the pleura with some adhesions between the right lung and the right dome of the diaphragm.

In this case the infiltration of the parietal and visceral pleura produced a diminished respiratory excursion of the lower right chest, a loss of normal resiliency, absence of tactile fremitus and diminished respiratory, spoken voice and whispered sounds. These are the same phenomena usually encountered in a pleural effusion.

In many cases where the primary pathology is within the lung tissue itself, certain pathologic changes within the contiguous pleura supervene and ultimately so alter the primary phenomena as to render the correct interpretation of the existing physical signs almost impossible. The most common of these secondary pleural changes is the fermentation of dense adhesions between the visceral and parietal pleurae overlying an extensive tubercular caseation of the underlying lung tissue. In these cases, even with the aid of the exploring needle and the Roentgen ray, the diagnosis is made of a pleural abscess and the patient referred to the surgeon for a rib resection. A case to elaborate the point under discussion is as follows:

A patient entered the St. Louis City Hospital complaining that for the past three weeks he had noticed progressive weakness, loss of appetite and some



obscure abdominal symptoms. A physical examination of the left chest from the fifth dorsal vertebra posteriorly and from the fourth costosternal articulation anteriorly, to the lower costal margin, revealed the typical findings of a pleural effusion including the obliteration of Traube's semilunar space and the costophrenic angle. The heart was displaced to the right until percussion of the right border revealed a relatively dull note 6 cm. to the right of the right sternal margin. An aspirating needle was introduced between the eighth and ninth ribs in the scapular line and 1 c.c. of thick pus was withdrawn. The Roentgen ray confirmed the diagnosis of a left pleural abscess. The patient was submitted to an operation and upon resecting the ribs, the surgeon found dense adhesions between the parietal and visceral pleura with a complete caseation of the left lower lobe.

The failure to diagnose this pulmonary caseation and the mistake of calling it a pleural abscess, was due to the dense adhesions between the two pleurae. In this case the aspirating needle and Roentgen-ray findings were of no value toward a correct diagnosis. The costophrenic angle and Traube's semilunar space in this case were obliterated because of the enlargement of the caseated lung. This will also serve to explain the displacement of the heart.

This paper is offered not as a final word on the diagnosis of pleural effusions, but to call attention to the fact that in atypical cases the diagnosis is extremely difficult, and in many chest cases of obscure physical findings the physician will do well to bear in mind the possibility of some type of effusion. The exploring needle does not always find the fluid and consequently is not of itself infallible. The same can be said of a roentgenographic plate, although this is unquestionably of the greatest aid in assisting the physical signs. Bearing in mind the fact that very frequently we are unable to have a roentgenographic examination of our patient, it might be well for one to weigh most carefully the signs found on a carefully made physical examination.

529-32 Frisco Building.

#### THE RIGHT THING AT THE WRONG TIME IN VACCINE THERAPY\*

W. F. GRINSTEAD, M.D.  
CAIRO, ILL.

That confusion still exists in the minds of many medical men upon the subject of immunity and its production there can be no doubt. It crops out in medical society discussions and in consultations by medical men with astonishing frequency. One cannot escape the conclusion that many patients escape with their lives in spite of the doctor instead of by the help of the doctor. While this statement is true, there never was a period in human history

when the profession had so much accurate knowledge of disease, its prevention, diagnosis and cure as in the beginning of the twentieth century. So voluminous is our present day fund of trustworthy knowledge that men are forced into special lines of thought and labor because the days are too short and life itself too short to permit any one man to become familiar with details. Notwithstanding these facts, every man actively engaged in practice must have an accurate, general knowledge of what has been established and is being successfully employed in the healing art.

In an able and well written article a few months ago by a great artist with brush and pencil, the author stated that the perplexing problem with the cartoonist is not the delineation of the object presented, but it was to get the idea, the conception, of something to present. Exactly the same thing troubles the essayist. His difficulty consists more in grasping a clear, well defined idea of a subject which he wishes others to see as he sees it himself, than in writing the word picture.

Many years ago, in a personal conversation with an impressive entertaining public speaker, I asked, "What is the mainspring of oratory?" His answer was, "First of all, the orator must have something to say." Now, the inspiration, the idea, the "something to say" that actuated this paper is the confusion I have noticed, among practicing physicians, of bacterins with antitoxins.

Undoubtedly the mistake is frequently made of injecting vaccines in streptococcus and typhoid infections in the expectation that they will act as antitoxin acts in diphtheria. The result is injury instead of benefit. Fuel instead of water is added to the fire. Misguided doctors often do more harm than good. The danger from bacterial infections is in their toxins. Vaccines are toxins. Obviously, when we inject a vaccine we introduce a substance we are seeking to destroy. We are "fighting the Devil with fire." The toxins in vaccines are secured by killing the bacteria; so that more toxins than have been injected cannot be manufactured in the blood by these microbes. In a healthy person the blood is supplied with substances called antitoxins or antibodies which protect the body from the fatal effect of txins.

This state of "preparedness" is called immunity. When toxic germs invade the body, nature, or physiology if you prefer, promptly starts the manufacture of an additional supply of antibodies for defense. Nature is not always able to supply antibodies fast enough with the result that the enemy overwhelms her defense and death results.

This is an age of reason. Men want to know the "whys and wherefores" of everything they observe. People are educated and philosophi-

\* Read at Southeast Missouri Medical Association, Cape Girardeau, Mo., May, 1916.



cal. They delve to the root of physical phenomena. When they cannot find a logical explanation they build theories for practical purposes and wait for verification or disproval. An active mind longs for a reason. The facts of immunity are not well explained and, therefore, many master minds have theorized when proof was wanting.

The noted Russian scientist, Elie Metchnikoff, demonstrated in 1884 that the leukocytes in the blood swallowed, so to speak, and destroyed bacteria. He called them phagocytes, which mean cell eaters. He explained the phenomena of inflammation as the contest that was being waged between the white blood corpuscles and pathogenic bacteria.

In 1885, a year later, Paul Ehrlich, the German biologist and assistant to the immortal Koch, elaborated one of the most fascinating theories of immunity that has ever been offered to research workers.

He called it the *Seiten-Kettentheorie* or side-chain-theory. It is a long drawn-out theory which cannot be explained in a short paper like this, but the essence of it is that the cell molecule has associated atoms attached which have an affinity for the toxins of pathogenic bacteria. They combine with the toxins and neutralize them. These defensive atoms he calls receptors. When the system has a greater demand than can be supplied by these receptors, these fixed atoms, the cells manufacture an auxiliary supply which is liberated in the blood. These are called ceptors and do the same work as the attached receptors.

The theory of Metchnikoff was greatly advanced by Sir A. E. Wright of England, who in 1903 announced his opsonic method of determining the power of the blood to execute phagocytosis. Opsonins are substances which act as a condiment or sauce upon pathogenic bacteria; so that the relish or appetite of the phagocytes is whetted up to eat much larger numbers of the deadly microbes. The name opsonins comes from the Greek, through the Latin word *obsono*, which meant "I purvey." It signifies, "I prepare food." By injecting vaccines nature is stimulated to provide a larger amount of opsonins or sauce. When we inject antitoxin we supply the sauce which has been previously manufactured elsewhere. Here is where our confusion often creeps in. We think that the bacterin neutralizes the toxin which is killing our patient. It doesn't do it. If the infection is acute and alarming, the vaccine simply adds more of the toxin. It is like giving a man whisky who is already drunk. The toxin of the disease is flooding the body and whipping nature's opsonin factory furiously. When we add more toxin we act like the driver who still whips his horse that is down from fatigue.

We are all so obsessed with the promptness

and reliability with which quinin neutralizes malaria and antitoxin stops diphtheria that we sometimes forget that these antibodies are already manufactured and ready to supply. They have been prepared in advance and have been held in readiness — a very different proposition.

Let us turn for a moment to that wonderful immunity recently vouchsafed to mankind by vaccination against typhoid fever. Three little shots at ten day intervals guarantee protection for three or four years even in the thick of raging epidemics. But if you neglect to vaccinate your patient before he is infected, what success do you have in curing him with your bacterin? The same may be asked of lock-jaw. In medical societies and consultations I hear physicians say, "I have had several cases that were benefited and got well under bacterin treatment." I feel sometimes like quoting them the story of St. John Long's liniment which was recently recalled in a paper on vaccines to show the unreliability of testimonials.

Here is the essayist's language: "We read of St. John Long's liniment that in the early part of the nineteenth century became famous. It was good for everything (like the nigger's rabbit). There were any number of reports to substantiate this statement. So great was its fame that an agitation was begun to have the English parliament buy the secret. This proposition actually passed the legislative chambers and a considerable sum of money was voted to St. John Long. This great remedy had for its basis turpentine, while one of the principal ingredients was white of egg. The compound is about as capable of proving the correctness of the thousands of good reports as Eddyism of curing cancer or osteopathy of curing typhoid or pneumonia."

The healing power of nature makes possible the senseless isms in medicine and shields the ignorance and mistakes of doctors. Not long ago the "Wine of Cardui" people, who were suing the American Medical Association for exposing their graft, took depositions in Cairo. They brought up a doctor from somewhere down South, who testified that he had prescribed Wine of Cardui and his patients had gotten well. He did not know what was in it. In getting his Cardui check cashed at one of the local banks, he talked freely to the cashier about his use of the stuff as though it was a good joke. Returning to the typhoid treatment by typhoid vaccine, it is the right thing in the wrong place. The prophylactic vaccination is a glorious success and is pure science. It stimulates the production of antibodies in the system which are like a great army of soldiers on guard. They attack the enemy at the moment of invasion and his army is massacred from the trenches. Let the invasion start first and the

battle may be lost before the army of defense can be marshaled. Nature, as well as the physician, is greatly handicapped in her efforts at defense by the fact that she cannot use her typhoid army to fight lockjaw and other invaders. She must have different soldiers to fight different enemies.

When the doctor comes to assist nature and the battle is on, he cannot always identify the enemy and don't know what kind of ammunition to use. This difficulty led to the manufacture of phylacogens which combine all the different kinds of ammunition. With a charge of phylacogens in his gun, the doctor cannot miss the enemy entirely, although he may not hit him very hard.

This phylacogen bomb reminds me of a story I used to hear in my boyhood of a country doctor who did his own dispensing. He gathered up all his medicine that was left after patients got well or died and dumped them into a big, one gallon, black bottle. By this plan he not only economized, but made a compound of all the remedies he employed in his practice. When he was called to a case that he could not diagnose, he gave some medicine out of this black bottle. He could not fail to strike home with this charge.

The modern, fashionable black bottle contains phylacogens. When all is said and done, we cannot prevent smallpox with typhoid vaccine nor can we prevent typhoid infection with smallpox bacterin. Neither can we kill the toxin in a patient infected with tetanus by injecting more toxin; nor neutralize the toxin in a patient in acute typhoid by injecting typhoid bacterin. I have a sincere conviction that our profession is now being worked overtime by the commercial laboratories. They circularize us, epitomize us and tongue lash us until we think vaccines by day and dream vaccines by night. They give us a spoonful of beer with a steinful of foam with the result that we are all blown up with wind. Recently one of their representatives called on me with a nice little speech which his laboratory had written for him and he had memorized it well. It was a joy to listen to him. He emphasized especially a side line which accompanied his bacterin products in the nature of an antiseptic. He declared that the United States Public Health Service had put its stamp of approval on his product so that there was no question about its reliability. Of course his house was putting out the product under a trade name so that they would not get mixed up with imitations; but they were making the real thing, he declared. It was prepared from pine oil, a biproduct of the manufacture of turpentine. Having a personal acquaintance for more than twenty years with the surgeon-general of the U. S. Public Health Service, I wrote him for information

about the new antiseptic. He sent me some literature and a personal letter in which he used the following language:

*My dear Dr. Grinstead:*

Referring to your letter of the 11th instant, I take pleasure in enclosing copy of Reprint No. 304, in which reference is made to the Hygienic Laboratory pine-oil disinfectant. In so far as known to me, this preparation has not yet been placed on the market by any commercial firm. Subsequent to the publication of the article in question, the ingredients entering into the composition of the disinfectant have greatly increased in price, and are at present very difficult to obtain.

Very truly yours,

RUPERT BLUE, Surgeon-General.

I give this instance to illustrate how we are continuously exploited for commercial purposes and to suggest that we "stop, look and listen."

My conclusions are:

1. That antitoxins and bacterins are often confused.
2. That vaccines are toxins and when properly used create antitoxins.
3. That each bacterin has its own toxin which must be neutralized by its own opsonins or antibodies.
4. That acute infections flood the system with their specific toxins and when the physician injects more of its toxins he adds fuel to the fire.
5. That certain chronic infections can be improved by bacterins which goad nature's laboratory to greater activity in supplying opsonins.
6. That vaccines or bacterins serve their greatest usefulness in stimulating the production of antibodies in advance of the infection so that the enemy will be prevented from invading the fortification as in smallpox and typhoid fever.

808 Commercial Avenue.

#### THE TWO-V FLAP—A PRACTICAL CIRCUMCISION FOR CHILDREN

E. D. TWYMAN, M.D.  
INDEPENDENCE, MO.

Though circumcision has been the most commonly performed operation since Abraham's time, the methods of accomplishment are not uniform and leave something to be desired. It is primarily an undertaking for sanitary purposes and is done most often for children. It fulfills the following functions:

1. Contributes to cleanliness.
2. Minimizes masturbation.
3. Minimizes venereal disease.
4. Prolongs male participation in the sexual act.
5. Relieves phimosis or paraphimosis.

These effects seem so obvious as to require only mentioning. They are desirable, and so clearly recommend the operation that little lay reluctance has to be overcome as a rule, and the only consideration is to choose the most proper and satisfactory method and to decide what anesthetic is to be used if any.

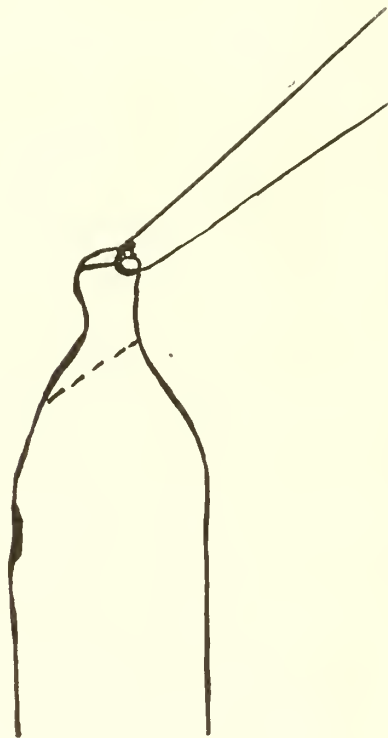


Fig. 1.—Prepuce stretched. Line for scissor cut dotted. Adhesions already freed.

While not purposing to discuss adult circumcision at this time, I will express my preference for local anesthesia for adults, and for the "bloodless flap" operation of Professor Lespinasse of Northwestern University. I do not think either so nearly meets the indications in children. I will enumerate the things to be desired in an operation for children and try to justify the method described, noting the faults of some older methods.

It is to be remembered that circumcision is a very minor operation and should be performed by all general practitioners. Even an extra assistant is an expense that puts it out of the reach of many families. They cannot furnish a nurse in many cases nor carry out any but the simplest instructions. So the aftercare should be fool proof. Nevertheless, uniformly good results are expected and it is right that a proper selection of method should assure all these things.

The indications are:

1. To be rid of the excess of skin and mucous membrane, thereby diminishing sensibility and

the area of secreting surface and smegma collections.

2. To prevent readhesion of the mucous membrane to the corona during the healing period.

3. To prevent recontraction of the scar with resulting phimosis or paraphimosis.

4. Rapid work, so that it can be justly said that no anesthetic is needed; or if one is used that it be the briefest possible.

5. No assistant should be required.

The operative types are:

1. Simple dorsal slit.

2. Simple trimming of the prepuce.

3. Combination of 1 and 2.

4. Clamp operations.

5. Flap operations.

Remarks.—All the first four types can be rapidly done, the dorsal slit quickest of any. But the simple dorsal slit does not remove the sensitive and secreting excess, and is unsatisfactory in spite of the wonderful absorption and rearrangement of tissue of which nature is capable. Even in an edematous and inflamed case it is better to do a proper operation than to do a dorsal slit. If the scar is circular as in the trimming of the prepuce, there frequently occurs a phimosis or a paraphimosis during the inevitable period of scar formation and contraction. One should therefore reject all operations that produce a circular scar. Nor should one ever use a continuous stitch or other device tending to shorten the scarline. Nature will do that. One should arrange for the longest



Fig. 2.—Dorsum. A, dorsal slit in skin only. B, mucosa; dotted lines indicating V to be cut.

scarline that is feasible. This necessarily calls for an elliptical, V shaped, or other artificially irregular line. However, it is to be noted that some very contracted lines will stretch wonderfully after all the inflammatory reaction has subsided. The combination of a dorsal slit with trimming, as well as the use of curved or angular clamps does largely away with the chance



of scar contraction giving trouble. But there is constant trouble with readhesion of the mucosa to the sides of the corona. Especially is this true of those cases where the mucosa was adherent to the corona, as it frequently is, and the mucosa had to be forcibly separated at the time of the operation. This leaves a nonepithelial surface ripe for readhesion. To avoid this difficulty requires skill and management in the aftercare. It can be prevented to some extent by circular

of two layers, skin outside, mucosa inside. An underlying fascia layer follows this reduplication carrying the circulation. The triangular plication of mucosa anteriorly, called the frenulum, is more complicated but is not interfered with in this operation. The frenular artery is usually cut and sometimes requires tying; the dorsal vein requires it more rarely. Bleeding usually controls itself. In one case there was a secondary hemorrhage after five hours, requiring ligation. Ordinarily one is able to use the tissues as so much inanimate material.

The required instruments are:

1. A sharp scissors.
2. A toothed thumb forceps.
3. A threaded needle.
4. A small curved hemostat.

#### TECHNIC

1. The patient is stretched in a good light and feet and hands held firmly by two lay persons, the right handed operator sitting on the right side.

2. The prepuce is retracted and cleansed (the hemostat may be inserted under it and opened, thereby separating adhesions and stretching a phimosis if either are present).

3. The prepuce is grasped by the thumb forceps and pulled out past the meatus. See Fig. 1.

4. And clipped close by the scissors.

5. A liberal dorsal slit is made in the skin only (not in the mucosa). This opens a dorsal

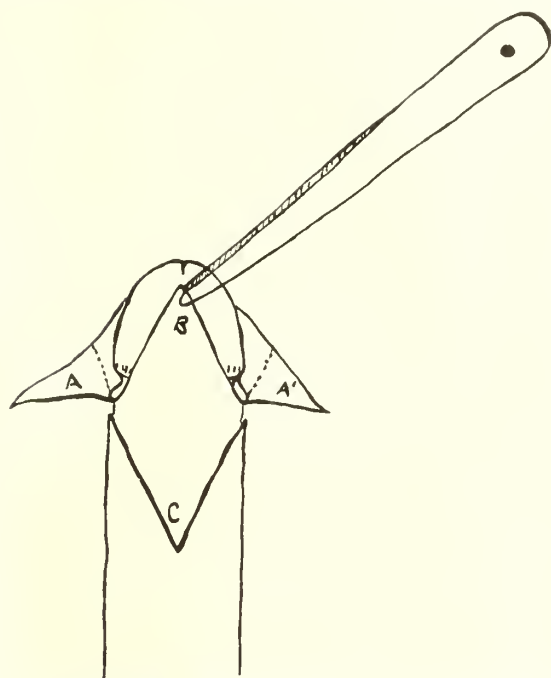


Fig. 3.—Dorsum. Skin retracted. A A', lateral mucosa to be cut off along dotted lines. B, dorsal mucosa V flap. C, dorsal skin slit.

bandaging, though the small parts render this difficult; or the flap can be pushed back every day by a nurse, regardless of the protests of the little patient. However, it is better to be able to dispense with circular bandaging and with handling of all kinds other than mere washing without manual contact. Safety first, then the humanities.

To avoid all these difficulties requires a flap operation, specially designed. The number of these is legion and the results good. It therefore requires some little courage to recommend another modification. Many now in use fill all the above indications except those of speed and simplicity. Still time is so very important in operating on the little patients that I venture to mention a method I have used on about seventy cases with entire satisfaction. It may be called the "two-V flap." It fulfills the first three indications and can be done without assistance and without any anesthetic (in infants) in from two and a half to three and a half minutes.

Anatomy.—The prepuce consists in essential

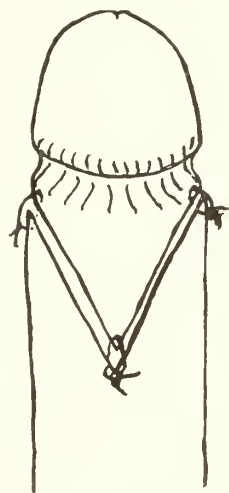


Fig. 4.—Dorsum mucosa V in place in skin V and sewed.

V in the skin. If too abrupt the angles may be shaded off. See Fig. 2.

6. The mucosa is grasped at the middorsal edge, and a V made by cutting from this point to the side of the base of the corona on each side. See Fig. 3.

7. The mucosa is trimmed close to the sulcus on each side leaving enough proximal mucosa

to hold a stitch. From thence forward the line may run either straight around under the frenulum or the trimming may shape another V of mucosa at that point, which will result in a greater or less fold of tissue as the operator may desire. I do not believe in cutting the frenulum for children as is done in the Lespinasse operation. See Figs. 3 and 5.

8. A stitch sews the V of mucosa into the skin V left by the dorsal slit. See Fig. 4.

9. Another stitch sews the mucosa under the frenulum to the ventral skin. (The frenular artery can be controlled by making a mattress stitch and including the vessel.) See Fig. 5.

10. Two or more lateral stitches may be placed as needed for approximation. See Figs. 4 and 5. (Catgut is used throughout.)

It will be seen that this method results in an irregular scar, either a semicircle anteriorly and a V posteriorly or a V both front and back as

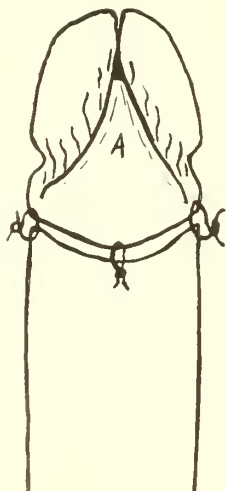


Fig. 5.—Ventral aspect. A, frenulum.

desired. That the mucous V is firmly held back in the dorsal slit. That the skin which will not adhere approximates the coronal sulcus at the sides where readhesion so often is seen, preventing this complication and that the amount of pouching under the corona is a variable under the control of the operator. I am inclined of late to allow less of this than formerly. A progressive inclination of the scissors when trimming the redundant prepuce results in a partial V both anteriorly and posteriorly even before the dorsal slit is added, and it shortens all later steps if one is sure to take the redundancy with a liberal hand. One comes to trim the sides almost by touch, rapidly and closely.

Aftercare.—Sterile vaselin is applied on closely woven cloth, a pad is applied and the cloth or trousers fastened up. The penis should not hang down, as it increases the swelling. Once a day or as often as soiled a wash should be used. When the stage of exudation is past boric acid powder is substituted for the vaselin.

No dressing should be continued so long as to prolong tenderness, and heavy cotton pads should be avoided for the same reason.

Anesthetic.—For babes (who do not seem to manifest a sense of continued or remembered pain) it seems to be best not to use any anesthetic. They fall asleep almost between stitches, literally while the dressings are being put on. And I cannot bring myself to add a real element of risk to a proceeding otherwise so harmless. Even from the standpoint of unpleasantness and disturbance, as much may result from the attempt to anesthetize as from the operation itself. This holds true up to two or three years. Before that age ether is given rather for the benefit of the family. At an age of ability to struggle it is given for the benefit of the operator. Some patients as young as 6 years accept local anesthesia nicely. Often a circumcision precedes a tonsil, adenoid operation; this adds practically nothing to the total time as it can be done at a stage of anesthesia which does not permit the other work, and is over by the time the gag can be inserted.

Recapitulation.—The two-V flap is a simple, quick operation, meeting the theoretical indications and obviating assistance and skilled aftercare.

#### HOOKWORM DISEASE\*

A. H. THORNBURGH, M.D.  
WEST PLAINS, MO.

It will be our purpose at this time to give a study of hookworm disease rather than a paper of original research on the subject. We occupy a zone so near to known infected territory that it is well, and very essential, that we keep this disease in mind and, when we meet a case that presents the symptom complex peculiar to this malady, to search for it. One writer has said that the first essential point in the diagnosis of a given disease was to suspect it, and we have found by years of practice and experience that we often fail to diagnose properly, because we did not suspect properly.

*Hookworm disease*—*ankylostoma duodenale*—sometimes called *uncinaria duodenalis*, is caused by certain species of hookworm, which live as parasites in the small intestines. It is most generally found in warm climates, and certain regions of the temperate latitudes where persons have better opportunity to come in contact with warm, damp earth, or water containing larvae of this parasite. It is characterized by progressive anemia, weakness, impaired development in young subjects and by various symptoms on the part of the circulatory, diges-

\* Read at the Fifty-Ninth Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 8-10, 1916.

tive and nervous systems, in varying degrees and combinations, occasionally proving fatal. It is capable of cure by removal of the parasite and of prevention by hygienic measures.

It has about forty synonyms, which indicate to some extent the wide range of symptoms as well as the extensive geographic distribution, as shown by the diversity of language.

The history of this disease dates further back than one may at first suppose. Piso in Brazil in 1648; Father Labat in Guadeloup, 1748, and Edwards in Jamaica in 1799, have each described it under different names, as characterized by severe abdominal symptoms, anemia, dropsy and weakness, often proving fatal, occurring chiefly among negro slaves but also affecting the other classes of the population. The first hookworms were discovered in 1782, but did not change the clinical study. This discovery was by Gonze, who found some worms in the intestine of a badger. He named it *ascaris criniformis*, and described its shapes and hooks. Dubini, in Milan, in 1838, found them in the intestine of a woman who died of pneumonia, and then by careful observation found them in about 20 per cent. of the bodies examined. After describing the peculiarly bent shape of the body and hooks in the mouth, he named it *agchylostonia*.

The dirt-eating habits of anemic negroes in several southern states led Hirsch, in 1883, to announce that hookworm disease existed to a slight extent among the negro population of some parts of the Southern United States. This dirt-eating habit was also noted by Pitt, in 1808, among poor white people as well as negroes. This habit was given as a cause, by many of the early writers, for a very common anemia found among the poorer classes. Almost every plantation had three or four or more of these cases, and when the vital powers were undermined to any great extent and the disease became visible, the victim was accused of being lazy or of malingering. It was this failure to understand the true nature of the malady which gave rise to its name the "lazy disease."

Hookworms are found over a large territory, embracing all parts of the tropics and in many countries of the sub-tropical climate, as well as some regions of the temperate zone. The extreme range of latitude is from 51° North to nearly 40° South. This zone embraces all of the United States and extends as far south as Southern Australia. It is no doubt the chief cause of tropical anemia heretofore thought to be due to climatic conditions rather to specific disease.

In Europe it is found in Belgium, France, England, Germany, Hungary, the Balkans and Italy. It is found in Spain, Austria, Hungary, Servia, Bulgaria, especially in the mining regions. It has been found quite prevalent in

these last named countries. In Africa it is found widely disseminated through Egypt and the Mediterranean country, and throughout the central and southern portions, but Zine and Jacoby have pointed out that the African negro races do not show severe symptoms like many other races. But from whatever clime he comes, or under whatever flag he serves, he remains a hookworm still and his works go with him.

The infected districts of the United States extend from Virginia at the Potomac River to our Southern borders. The states of Central and South America also have hookworm disease. A report by Dr. C. W. Stiles of the Public Health and Marine Hospital Service of the United States, in 1908, showed that 12.67 per cent. of cotton-mill workers are hookworm victims. From investigations of various men, on various classes of workmen, it was found that this disease is very prevalent in the Southern States, a general average for all classes being about 30 per cent.

Occupation and social position bear an important part in the spread of this malady. It is known that those working in the soil, as miners, agriculturists, laborers, etc., and the poorer classes living in unsanitary surroundings, are most generally attacked. "The poorer the man, the more exposed to heavy infection." Those working in dirt with their hands or going barefoot are in great danger because of the liability of infection through the slime. It is a very common sight to see barefoot children and adults suffering from "toe itch," which is one of the manifestations of the disease.

There are two methods of infection by hookworms: through the mouth directly, and through the mouth indirectly, by way of the skin. This latter method appears to be the main source of infection. There are but two species of worms that infect man; *ankylostoma duodenale* and *uncinari americana*. These reach adult life in the intestinal canal, where they lay eggs which pass out with the feces; the eggs cannot hatch in the intestinal canal for lack of oxygen, and because of the presence of acids, gases, etc., produced by intestinal bacteria. The number of eggs passed with each stool of a heavily infected person is enormous—estimated at from 2,000,000 to 4,000,000. It has been proved by experiments that the eggs hatch best in a sandy porous soil where the rain can dilute the feces and mix it well with the soil. This may explain the greater prevalence of the disease in sandy regions. Moisture and shade are also necessary to the hatching of the eggs. While they hatch only in warm seasons, yet the sun's rays destroy them by drying the hatching places.

It is possible to be infected by the mouth by drinking water containing larvae or eating raw vegetables from infected gardens, but this is thought to be of rare occurrence.



Repeated experiments by Bently, in 1902, and later by Claude Smith, proved conclusively that the worm entered the body through the skin very readily, and the immediate result of each infection through the skin was a localized area of redness, with formation of small pustules at the point of entry. The worms are found in the lesions of the feet, such as toe itch, water itch, etc. They pass rapidly through the skin and other tissues into the intestines, and by the end of the sixth or seventh week ova are found in the stools. We cannot go into all the causes of infection, but call attention to the most general one—unsanitary conditions about the living premises, carelessness in handling privies, etc., and the almost universal practice among the poorer classes of going barefoot during the warm seasons.

*Pathology.*—One of the most marked pathological conditions is the severe anemia and discoloration of the skin, especially in the medium and severe cases, the skin showing from waxy white to dirty yellow, tallow or tan. It may become dry and parchment like, due to suppression of perspiratory glands. Pruritus is of more or less frequent occurrence.

There is usually dilatation and catarrh of the stomach, with catarrh of more or less severity in the small intestines, due to the bites made by the worms. In some cases the intestinal wall may be found very much thinned—in other cases thickened. These effects on the bowel are due not only to the bite of the worm in the mucous membrane, but to their toxic effect.

Reference has been made to ground itch, or "toe itch" also called by the miners of Cornwall "new sump bunches." This is characterized by the appearance of a few itching papules or severe itching dermatitis between the toes or under the toes, particularly in those who go barefooted. This is probably the initial lesion of uncinariasis due to the penetration of the larvae into the skin. Possibly not all cases of hookworm start this way and possibly not all cases of toe itch are caused by hookworm, but their relation is so intimate that it is safe to call it the initial lesion, or at least a very general symptom of hookworm disease. Edema of the face, feet, ankles, legs, scrotum or entire body may be present, especially in patients showing a hemoglobin of 20 to 40 per cent. In severe cases or cases of long standing, the face may wear an anxious, stupid expression, with conjunctiva, chalky white pupils dilated, lips pale or white, and the patient may show a blank stare. Cervical pulsation is seen in severe cases. The abdomen is more or less prominent with tendency to "pot belly" or "shad belly," and ascites may develop.

Digestive system shows different grades of disturbance. The appetite may be light or ravenous, or in severe cases absent. There may

be an abnormal craving for sour articles as lemons, pickles, kraut, or for salt, coffee, butter-milk, etc., or a perverted appetite for resin, chalk, tobacco, ashes, mud, clay, cloth, paper and other numerous articles. The greatest perversion of appetite is for eating clay, hence the term "dirt-eaters." Flatulence, sour stomach, nausea and vomiting may occur, while pain and tenderness in the epigastrium are given as the most constant, suggestive and clearly marked symptoms of the digestive tract. There are usually alternating periods of constipation and diarrhea.

The pulse varies from 80 to 132. Palpitation and dyspnea are common, especially in severe cases. The heart becomes dicrotic, weak and compressible, finally thready, irregular and intermittent. Any exertion or effort on the part of the patient aggravates these symptoms. The patient becomes weak and listless, and suffers great physical indifference. There is dizziness and tinnitus aurium, much headache and insomnia. There is often pulsation of the great veins with bruit du diable of the jugulars. The intellect is dulled and mental processes are slow, and in severe cases of long standing there are various mental disturbances such as delusions, illusions and acute mania. There may be melancholia with occasional suicidal tendency. The mental disturbances are the result of a disturbed circulation in the brain caused by cerebral anemia.

*Blood.*—Dock and Bass say that anemia is the most constant symptom and determines the severity of the case. The type is almost always that of a secondary anemia or chlorosis, and without citing statistics it has been found there is an enormous reduction of red blood cells without any general increase in the leukocytes.

Pain in the joints and bones and especially in the sternum is common and persistent. There may be, and most commonly are, nervous and mental conditions present, especially in young patients and in cases of long standing, but these phenomena are such as may be ascribed to anemia. There may be hypochondriasis and various mental diversions; insomnia and night terrors are common in younger patients and yet somnolence often occurs so that the patient keeps awake during the day with difficulty.

*Diagnosis.*—As Manson says, "The secret of the diagnosis of uncinaria, like that of many other diseases, is to suspect its presence." An absolute diagnosis is made only by finding the eggs or worms in the feces. A fairly correct diagnosis can be made from the symptoms, provided we have hookworm disease in mind. A history of an attack of toe itch followed by a general breaking down of the health, progressive weakness, anemia, underdevelopment in children, mental torpor, a tendency to be lazy without other known cause, should lead us to suspect hookworm disease. In warm, moist

climates that are known to be infected districts, it is fairly easy to make diagnosis. However, the most satisfactory way to make certain is by examining the feces for the ova of the parasite.

A microscopic examination is fairly easily made. A small quantity of formed feces is best for the purpose, because it is easier handled, less liable to contamination by other germs, and is less objectionable to the investigator. A small open mouthed, two drachm bottle makes the best container for the purpose. For examination purposes a slide of 2 by 3 inches is best. Put in the center of the slide two or three drops of water, and with a toothpick place a small quantity of feces, the size of a match head, in the water and stir well until well thinned and easy for transmitting light. This is spread thinly on the slide and no cover glass used. Examine only wet preparations, using the two-third objective and one inch eye piece. The ova of *ankylostoma duodenale* are ellipsoid, 56 microns by 34 microns laid in segmentation. In other words, to our eye with a one inch eye piece and a two-third inch objective the eggs seem to be  $\frac{3}{8}$  to  $\frac{1}{2}$  inch long by  $\frac{1}{4}$  less than this in diameter. The shell is smooth and regular, while the yolk is made up of fine granular, dark gray material and contains a central lighter area. By a little experience, the eggs are easily recognized when present. The worms are  $\frac{3}{8}$  to  $\frac{1}{2}$  inch long.

Different writers have suggested that the number of worms present may be indicated by the number of eggs found. The eggs of *uncinaria* are easily differentiated from those of other parasites except possibly *strongyloides*.

*Prognosis.*—The prognosis of hookworm disease varies as widely as the limits between the very mild and the lethal cases.

When the worms are few and the patient remains well nourished hookworm disease does not always develop. The subject remains a carrier, that is a person in whom hookworms live as parasites but who, either from small number of worms, from race immunity or other causes, does not develop obvious symptoms. These persons, by the way, are rather dangerous by reason of their liability to spread the disease unconsciously. If the hookworm carrier remains untreated, he will probably be undeveloped, and show some anemia or neurasthenia and will not be able to keep up with his classmates at school, or hold his own in his work or profession. However, in most instances these mild cases will recover after six or seven years, the parasites having died of old age and been expelled. The medium and bad cases, while they suffer severely, are easily cured, and as one writer puts it, "No disease is so amenable to treatment as *uncinaria* when treated persistently with the specific remedy." In the worst cases, where there is heavy infection with

thousands of worms present, the patient becomes rapidly anemic and weak and suffers with digestive disorders, such as diarrhea or hemorrhages from the bowels, and with extreme debility, and finally dies from malassimilation and exhaustion. These cases were formerly supposed to be those of pernicious malaria, interstitial nephritis, etc. Possibly many cases of supposed tuberculosis in the negroes were really undiagnosed hookworm disease. The mortality before treatment began averaged from all countries 30 to 40 per cent.

*Economic Importance.*—A person who has never been in an infected district cannot appreciate the ravages of this disease, nor how it keeps back progress by reason of the undevelopment of the children, the dulling of the faculties, the weakening of the energies and lowering the standard of vitality in the district. It has been recommended from a purely financial point of view that it would pay the cotton mills to compel all candidates for positions to submit to microscopic examination and if found infected, to undergo treatment before they are given employment. This rule would also hold good in some of the European coal mines and the mines of this country.

*Treatment.*—Very little need be said about the local treatment of the initial lesion, "toe itch." This may be treated antiseptically as any other sore. Empty the pustules that may form, and keep the sores clean, without making any effort to use specific medication, for the reason that the worm or larvae remains in the skin but a short time, rapidly finding its way into the circulation, and thence to the intestine. For the itching, some soothing, antiseptic application may be made such as the following:

Salicylic acid, 5 grs.; ung. zinc. oxid, 2 drs.; vaselin, 2 drs.; mix. sig. apply locally twice a day.

It is also important to keep the affected parts protected from further infection of septic material.

For the removal of the worms from the intestine, various remedies have been proposed, such as thymol, oil chenopodium, male fern, and betanaphthol. Thymol has been the favorite remedy, but on account of possible ill effects, it must be used with care. It must be remembered that the worm is partly embedded in the mucous membrane of the intestine, and also protected by quantities of thick mucous, and this mucous must first be removed by a brisk purge before the teniafuge is administered. Some writers recommend a calomel and jalap purge, while others use a saline, as magnesium sulphate, or sodium sulphate, on an empty stomach the night before thymol is given. Oil is never to be given in connection with thymol, as it is dissolved in oil and would cause unpleasant or dangerous results. Sixty grains



is an adult dose of thymol. Ashford and King's table of doses is as follows:

Under 5 years old in size,  $7\frac{1}{2}$  grains;  
 5 to 10 years old in size, 15 grains;  
 10 to 15 years old in size, 30 grains;  
 15 to 20 years old in size, 45 grains;  
 20 to 60 years old in size, 60 grains;  
 Over 60 years old, 30 to 45 grains.

Great weakness, anemia, diarrhea, cardiac depression, pregnancy, and dropsy, or other unfavorable conditions may require smaller doses than above.

Dock and Bass recommend the following mode of administering thymol: First, it is usually given on Saturday and Sunday for economical reasons. The patient is directed to fast on Saturday, and at 6 o'clock p. m. he is to take about 1 ounce of sodium sulphate. Sunday morning the following directions are to be carried out:

6 a. m., 20 grs. thymol;  
 7 a. m., 20 grs. thymol;  
 8 a. m., 20 grs. thymol;  
 10 a. m., one ounce sodium sulphate.

During the day, until 4 p. m., do not eat or drink anything but water. Remain quietly in bed, using a bedpan as needed instead of going to the toilet, as any effort at walking may bring on weakness, or fainting, or other untoward effects of the drug. Watch for toxic symptoms of thymol.

Dr. R. D. Keith, dean of the Singapore Medical School, states he has treated over 1,000 cases of hookworm disease with oil of chenopodium without a single bad result, and with better effect in removing the worms than with thymol, eucalyptus, male fern or betanaphthol. He allows the patient only a light supper, no breakfast, and then 10 minims oil chenopodium in a capsule. This is repeated each morning for three mornings. The last dose is followed two hours later with a tablespoonful of castor oil. This plan has also been carried out in the hospitals of Sumatra by different observers with uniformly good results. This remedy has the advantage over thymol, in that it does not produce the bad effects that thymol produces. Oil chenopodium increases the cardiac rate, promotes the secretions of the skin, bronchi and kidneys, and is a diffusible stimulant. Whatever drug is used to remove the worms from the intestine may be repeated as often as once a week, until the eggs and worms have disappeared from the stools.

After treatment consists of a general supportive and tonic course of remedies as are used in anemia or debility from other causes. Pure air, sunshine and a simple, nutritive diet are of greatest importance. Then come iron, quinin, strychnin, gentian, arsenic, etc., as indicated. But the greatest treatment, of course, is prevention. This is best done by careful and sanitary disposal of privy contents and sewage,

so that the eggs have no hatching place, and the worms cannot come in contact with the body or food.

#### DISCUSSION

DR. L. T. DUNAWAY, Eldorado Springs: I do not know anything about hookworm, but I have a sister who was in Porto Rico for five years and connected with a free clinic. They had any amount of the disease there. She said that the two prominent symptoms the patients always had were great pain in the head and weakness of the knees. These two symptoms were all the patients had. She told about the same story the doctor has related of the mode of infection. He did not get to the treatment but the treatment there seems to be easily handled. They had so many patients that they used as much as a barrel of salts in three months for there were sometimes 120 or 130 patients a day. The treatment employed at that time was to give them first salts, then thymol, proportioned according to the severity of the case, and age of patient, and work it off with salts. To every case that presented, I believe, they gave three doses of thymol and two doses of salts, each tied up separately in a piece of paper, and told them how to take it. Those who were not so anemic and so nearly dead that they could not go on with it were easily put on the road to recovery with five treatments on an average. She said it frequently happened that the patient presented himself so anemic and so far gone that there would be absolutely no color in the blood if they were bled in any way; blood-stain on white blotting paper looked more like coffee-stain than blood.

DR. G. W. HAWKINS, Salisbury: I have seen a number of these patients suffering from the hookworm disease in Porto Rico, and the prominent symptoms were, as the doctor has brought out in his paper, extreme anemia and extreme weakness. The symptom of anemia of the mucous membranes is especially one of the very early signs; that was not spoken of in the paper, I believe, at least I did not understand it to be. The other anemia developing gradually, following that first anemia, was a marked symptom, and with the marked anemia came great exhaustion, great weakness, and pronounced apathy. The treatment they were carrying out at Porto Rico at that time, in 1912, was as the doctor has outlined, and I saw a great many cases while I was there.

DR. A. H. THORNBURGH, West Plains, closing: My only purpose in presenting this subject is to call to your minds the fact that the hookworm disease does occur in this region and that it is one of the things we may be overlooking, and the symptoms of which we may be attributing to various other conditions.

I have had two cases. One case of hookworm disease presented this last January. After repeated examinations, I could not find anything wrong with him. Finally I suspected hookworm, made an examination for that, and found the ova. I then sent a specimen to the state bacteriologist and had the diagnosis confirmed. The patient was treated for hookworm disease, but he was one of the weaker cases—he had had it for two or three years. When I removed the protective coating from the mucous membranes and got action on the hookworm itself, violent diarrhea set in, and he died in about three weeks from diarrhea and weakness. He also suffered from those mental aberrations that I have mentioned. And that recalled to my mind the fact that we do have the disease in this country, that we are in the zone where it occurs, and if we would suspect hookworm disease more often and examine patients more carefully, make our diagnosis more thoroughly, we would not be defeated so often in our treatment of these weak, anemic patients. I am sure that we have it much more often than we think we do.



# VACCINATION IN SMALLPOX; WITH ILLUSTRATIONS OF SOME RECENT CASES \*

F. M. VESSELLS, M.D.  
PERRYVILLE, MO.

**Smallpox**—An acute infectious disease characterized by a cutaneous eruption which passes through the stages of papule, vesicle, pustule and crust.

**Vaccina (cowpox)**—Vaccination—An eruptive disease of the cow, the virus of which inoculated into man (vaccination) produces a local pock with constitutional disturbance which affords protection, more or less permanent, against smallpox. (Osler.)

Jesty, a Dorsetshire farmer, had had cowpox and in 1774 vaccinated successfully his wife and two sons. Plett, in Holstein, in 1791, also successfully vaccinated three children. When Jenner was a student at Sodbury, a young girl who came for advice, when smallpox was mentioned, exclaimed, "I cannot take that disease for I have had cowpox." Jenner subsequently mentioned the subject to Hunter, who in reply gave the famous advice: "Do not think, but try, be patient, be accurate."

To Edward Jenner, an English physician, born 1749, died 1823, belongs the credit of introducing vaccination and convincing the medical profession of its value. For years he had been convinced and on May 14, 1796, he took the matter from the hand of a dairy maid, Sarah Nelmes, who had cowpox, and inoculated a boy named James Phipps, aged 8 years. On July 1, matter was taken from a smallpox pustule and inserted into the boy, but no disease followed.

In the United States vaccination was introduced by Benjamin Waterhouse who, on July 8, 1800, vaccinated seven of his children. In Boston, on Aug. 16, 1802, nineteen boys were inoculated with the cowpox. On November 9, twelve were inoculated with smallpox; nothing followed. A control experiment was made by inoculating two unvaccinated boys with the same smallpox virus; both took the disease. (Osler.)

Smallpox is known to have existed in ancient Egypt 1200 B. C. It existed in China many centuries B. C. It was brought to America in the sixteenth century.

All persons exposed, if unprotected by vaccination or a previous attack, are almost invariably attacked.

Reason for reporting the following cases of smallpox and vaccinations: Following the Spanish-American war the country was generally infected with a mild form of smallpox. The laity generally and many physicians were strongly of the opinion the disease was not smallpox but some new disease, Cuban itch, etc.

We in Perry county were badly affected,

most cases of a mild type but some were very severe; in December, 1910, and January, 1911, there were many such cases. Most of the laity were opposed to vaccination; giving as a reason, vaccination was worse than the disease. A very common remark heard on the street was: "Would rather have smallpox than be vaccinated." Many of our local physicians did not urge vaccination because they were in a measure convinced by the laity of the truth of the above.

All of the cases of smallpox I attended, even the mildest cases, were quite sick for four days or until the eruption was well established, and there was not one but said he had never been so sick.

**CASE 1.**—Family I, N. M., aged 7. Temperature 102 to 105 for four days, with severe headache and backache, cough, coryza and profound depression. Characteristic eruption began to appear on the fourth day. Was discrete over body and limbs, soles of feet and palms of hand. Made an uneventful recovery.



Case 2.—Mr. H. M., aged 48.

At my first visit I insisted on vaccinating those of the family that were not successfully vaccinated. But the father and mother stated smallpox was not as bad as vaccination; that sister so and so had prevented smallpox in every case that had been exposed by giving the following:

Zinc sulphate .....	10 grains
Tincture digitalis .....	1 dram
Water .....	4 ounces

Mix and take a teaspoonful once a day for ten days.

They persisted in taking the above as directed and were sure they would not take the disease. In this family were three children aged 15, 17 and 19, that had been successfully vaccinated ten years previously. The father and mother and three younger children had never been successfully vaccinated. All had smallpox but the three successfully vaccinated children, and were quite sick.

**CASE 2.**—Family I, father of No. 1, aged 48. For four days very restless, excruciating headache and backache. No sleep during this time. On evening of the fourth day eruption began to appear on forehead and followed the usual course. During the first six days of eruption patient did not sleep and was

\* Read at the 59th Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 8-10, 1916.

very restless. The face was very much swollen. The right eye was swelled shut. On face and arms the vesicles were  $\frac{1}{4}$  to  $\frac{1}{2}$  inch in diameter, were raised  $\frac{1}{8}$  of an inch, and were  $\frac{1}{2}$  to 1 inch apart. The soles of feet and palms of hands were broken out.

CASE 3.—Family I. A. M., aged 3 years. Was quite sick for four days, till the establishment of eruption. (Illustrated.)

The three children successfully vaccinated were in constant attendance, and slept in the same room and also on same bed with those suffering of the dis-



Case 3, Family I, baby, age 3 years, 4th day of eruption.

ease, yet at no time were they in any way ill. Mr. M., the father, had had lobar pneumonia twice, and he says he would much rather have pneumonia than smallpox. Needless to say this family are firm believers in vaccination.

CASE 4.—Family II. E. R., aged 11. A severe case of smallpox. The eruption was very painful and the vesicles and pustules were more numerous and larger than Case 7, illustrated. Was ill for five weeks and made an uneventful recovery. In this family vaccination proved effective in a very striking manner. The father and mother were successfully vaccinated ten years previous, but seven children ranging in age from 2 to 17 years had not been successfully vaccinated. They had spent most of the day and all the night for the five days of sickness of sister in the room with her when I first saw the case. The papules were fully developed, temperature 104. Made a good recovery. On seventh day of illness I vaccinated the seven children; on the third and fourth day it began to take. They had a typical arm. The red and swollen areolae was in no case over three inches in diameter. Temperature 100 to 101 one or two days. At no time were there any bad symptoms. Not one of this family developed smallpox.

CASE 5.—Family III. F. V., male aged 52. Was extremely ill. He was sure he would die. Temperature 102 to 104. The usual extreme headache and backache with restlessness. Eruption end of fourth day. Vesicles were one-half inch in diameter. Crusts in a few instances were two inches in diameter. Recovery. In this family a son and the wife had had smallpox several years ago. Two grandchildren aged 2 and 3 were vaccinated eighth day of grandfather's illness and the third day it took. At no time were they ill; only slightly feverish for ten or twelve hours. They were in the room and on the bed with the grandfather all the time of his sickness.

CASE 6.—Family III. R. V., aged 17, daughter of Case 5. Would not be vaccinated. Sixteen days after the beginning of father's illness came down with smallpox. Was moderately sick for three weeks.

CASE 7.—Family IV. B. T., girl aged 10. The accompanying kodak illustration was taken on the sixth day of the eruption. She made an uneventful recovery in four weeks. On my first visit I advised

vaccination. Parents objected. On the seventh day of eruption, eleventh day of disease, I vaccinated family of seven. On third and fourth day vaccination took, with fever 100 to 101, which temperature continued for three or four days when there was a slight papular eruption, in all seven members of the family. With the advent of eruption, temperature dropped to normal and remained so. Evidently the vaccination greatly modified the smallpox, causing it to be very mild, disproving the contention of the laity that if one had been exposed to smallpox and was about to become ill with it, to vaccinate was sure death. The results in this family clearly show vaccination to be a benefit. Where there was smallpox in the family or if they were positive there had been exposure I had great difficulty in obtaining consent to vaccinate.

CASE 8.—Family V. J. H., male aged 30, smallpox moderately severe. Vaccinated wife on sixth day of disease, second day of eruption. She had a temperature of 100 to 101 for four days. The areola was five inches in diameter. Did not have a single symptom of smallpox. On the eighth day of disease vaccinated father, aged 72, deaf, blind, and both legs swelled twice their normal size from large foul varicose ulcers, causing him to be helpless. The vaccination took on the fourth day, temperature 100 part of one day. He did not develop a single symptom of smallpox, yet he was in the room all of the time with his son.

CASES 9, 10 AND 11.—Family VI. Mrs. R., aged 45; was seriously ill for two weeks. The vesicles were very large and prominent, and were discrete. Three children who had never been vaccinated and would not be, became very ill with smallpox.



Case 5, T. V., age 54.

CASES 12 AND 13.—Family VII. Brother and sister never vaccinated, quite ill for two weeks.

Family VIII. M., family of fourteen; none were ever vaccinated. At first case I advised family to be vaccinated, but instead they took the given prescription. All had the smallpox, some quite severely.

Family IX. F., not treated by myself but know the facts. Boy 24 years. The most severe case in this epidemic. The face was one solid crust. His life was despaired of. Ten years previous I vaccinated him, unsuccessfully, five times, using vaccine that was potent in others and I feel sure was good vaccine. at least it was the same as used successfully in 200



cases. I did not promise him immunity, but he was sure he would not contract smallpox. His father was in constant attendance on him for six weeks. He (the father) was successfully vaccinated forty years earlier and developed varioloid in a very mild form.

CASE 14.—Family X. M. B., girl aged 19. Stricken with a temperature of 105.5, wild delirium, very ill for forty-eight hours. Small discrete papular eruption at end of fourth day; from this time comfortable; only a few pustules. Had never been vaccinated. I vaccinated the mother and three children on the second day of eruption. The children went the usual mild course. The mother's arm was badly swollen and indurated from shoulder to elbow; quite painful for twenty-four hours; was entirely well in ten days. This was the only case of vaccination of a series of 150 that was infected.

I have vaccinated over five hundred people and have not had a case where there was at any time the least danger to life or the loss of an arm. True it is that three or four have had bad arms, but in every case it was not the fault of vaccination; rather it was due to bad care of the vesicle by the patient rubbing or scratching.



Case 7, B. T., age 10.

In the previous thirteen years there have been more than 2,500 vaccinations in Perry county with only one death, due to tetanus. I did not vaccinate this case, but treated the tetanus. It was caused by scratching the vesicle with the finger nails.

The bad results following vaccination in most cases is faulty technic, unclean underwear and improper care by the patient.

I wash the site of vaccination thoroughly with 98 per cent. grain alcohol and dry with absorbent cotton. Scarify very lightly, just sufficient to cause oozing of blood serum. If you scarify too deeply, causing much bleeding, the vaccine will not be absorbed. Then gently rub the vaccine in until there is puffing of the skin that looks like an urticarial spot or flea bite. Wait ten to thirty minutes until the vaccine and blood serum dry. When there is puffing of skin there is absorption of vaccine and nearly always successful vaccination. I do not bandage or use vaccine shields. It has been my experience that the bandage will stick or rub the vesicle and cause irritation, and the shield will slip and also cause irritation.

## THE RELATION OF THE LABORATORY TO THE PRACTICE OF MEDICINE \*

ELBERT L. SPENCE, M.D.  
FULTON, MO.

Although for hundreds of years the laboratory has been used to assist in the diagnosis of disease, the advent, during the last few years, of new and manifestly important methods makes a paper on this subject both important and opportune. The findings and conclusions of the men of research in the laboratories have furnished the key and explanation for some of the most serious diseases from which man suffers. The physician, working under modern methods, can approximate quite accurately the possibility of reviving the function of diseased organs and the outcome or prognosis in a large percentage of his cases. However, there remain many instances in which the end is not certain, and in which the possibilities of recovery are not entirely understood. It is to the research laboratory that we must look for the answer to these very complex and only partially solved problems. The only way in which it can accomplish this result is through cooperation with the physician and surgeon in practice. Progressive physicians regard the laboratory as indispensable and as a prerequisite in the scientific treatment of disease.

It is a significant and fortunate circumstance that increased attention is being directed to the establishment of free laboratories by state and city boards of health. Moreover, most modern hospitals maintain a pathologist who, by means of a well equipped laboratory, is an indispensable aid to attending physicians in diagnosing and estimating the prognosis of disease. The second function of the laboratory, which may be of more value, is the search for the solution of unexplained problems. It is obvious, therefore, that the laboratory has come to stay.

Although I realize the great importance of the laboratory in the practice of medicine, I am not of the belief that a man may make every diagnosis in the laboratory. The function of the laboratory is not to diagnose diseases; its task is to report the results to the practitioner, who should use them only as an aid for his own diagnosis. The clinician should also remember that there is only a certain amount of finality in the average laboratory report. Should there be a lack of agreement between the clinical findings and those of the laboratory, the practitioner should always adhere to the former, until there is perfect accord between the two. The sooner he arrives at a point of wholesome skepticism and accepts a laboratory report as of only secondary importance to his clinical findings, the better his results will be.

\* Read before the Callaway County Medical Society, September, 1916.



In sending specimens to the laboratory, practitioners are sometimes disappointed when the report is contrary to what they anticipate. It is this paradox I wish to make clear, and to do this I shall give illustrations from some of the more common diseases in which unexpected reports are often returned.

*Syphilis.*—The three ways in which this disease may be diagnosed in the laboratory are: a microscopic examination of the exudate from the chancre, a Wassermann test of the blood serum, and a Wassermann test of the spinal fluid. A positive test in either is more likely to be correct than a negative finding. Since a positive Wassermann is rarely obtained until the disease has progressed for thirty days, the only test which is reliable during the first month is a microscopic examination of the exudate from the chancre. However, if two or three slides have been sent to the pathologist with negative results the patient should be kept under observation for five or six weeks, having a Wassermann done every six or seven days after the third week. If the condition should be one of syphilis, a positive report should be obtained not later than the sixth week. Many persons with syphilis come in for treatment six or eight years after the primary infection, and in these instances a negative blood Wassermann often results. It is in such cases that an examination of the spinal fluid should be made. After repeated negative laboratory reports antileptic treatment is rarely warranted.

*Typhoid Fever.*—Because of its widespread prevalence and serious nature, typhoid fever has been a fruitful field for research. Numerous methods have been introduced as a means of diagnosing this disease. Blood culture and the Widal reaction have been considered by a majority of laboratory men as the most applicable of all.

*Blood Culture.*—During the first week of typhoid fever, this is by far the best method of diagnosis. However, this is a very difficult test to make unless the blood is collected by a pathologist of experience. I do not recommend it as a routine practice in the country.

*Widal Reaction.*—This reaction is based on the observation that serum from typhoid fever patients will cause agglutination of the specific bacilli when diluted to the required degree. As a whole this is a very reliable method. Nevertheless, there are certain objections which the clinician must consider. The reaction is seldom obtained before the seventh day of the disease, and in certain cases perhaps not until the convalescent stage. Furthermore, a positive Widal reaction in any person who has received a prophylactic dose of typhoid vaccine or a person who has ever suffered from the disease is of no value in the diagnosis of typhoid fever. Such persons under normal conditions almost invari-

ably give a slight positive reaction, but rarely develop typhoid fever. In suspicious cases, specimens of the blood should be sent to the laboratory every third day until a positive report is obtained or until it is certain that the condition is not one of typhoid fever.

*Malaria.*—It has been proved beyond controversy that malaria is caused by a parasite which is transmitted from man to man by mosquitoes belonging to the genus *Anopheles*. This parasite is found in the blood of patients suffering from malaria, in or on the red cells.

The essential factors in the diagnosis of this disease by the laboratory are: tendency to hypoleukocytosis; presence of the malarial parasite in the blood; and absence of a septic factor.

If the patient has not received treatment and proper search is made, the specific parasite can generally be demonstrated in the blood in all cases of malaria. The best time to collect the blood for examination in the tertian and quartan varieties is at the beginning of or during the paroxysm, while in the estivo-autumnal ten or twenty hours after the paroxysm seems to be the correct time. Obviously, several specimens collected at different hours during the day should be sent to the laboratory.

The following facts should be remembered when sending specimens for examination for typhoid or malaria: the impossibility of examining a single preparation for typhoid and malaria; importance of obtaining blood under sterile conditions from the lobe of the ear; necessity in the Widal test of collecting on filter paper two or three drops of blood; and for malaria the necessity of collecting a small drop of blood on a microscopic slide, this drop to be spread in a thin, even smear with a second slide.

*Diphtheria.*—In recent years, the diagnosis of diphtheria has been largely made by means of the laboratory. Every clinician should be supplied with sterile test tubes and swabs, and when a suspicious case appears he should make a swab and send it to the laboratory at once. A positive laboratory diagnosis of this condition, the same as in others, is far more reliable than a negative, since the diseased portion of the throat may not be accessible and one's technic in collecting the specimen not always infallible. Since it requires about twenty-four hours to obtain a report from a pathologist after the swab has been received at the laboratory, I advise in a very suspicious case, the giving of anti-toxin immediately after the swab has been made.

*Sputum.*—In the examination of sputum the most important pathogenic bacteria which the average physician wishes to know about are the tubercle bacilli. The failure of the pathologist to find such bacteria in a specimen should not cause the physician to believe his diagnosis to be wrong if the clinical symptoms indicate the disease. As a matter of fact, the tubercle

bacilli is rarely found until the disease has advanced almost to the point of cavitation.

*Nephritis.*—From our present increased knowledge of pathologic conditions doubtless no disorder, with the exception of syphilis, has profited more than nephritis. The results obtained have been instrumental in affording us a valuable method, not only for diagnosing the existence of the disease, but also in giving us a valuable guide to the treatment and an index to the prognosis of the case.

As an indication of renal insufficiency the clinician for years has depended on the routine examination of the urine. The urine then was examined as to amount, specific gravity, whether it did or did not contain albumin or casts. These reports were anomalous and likely to be confused often with conditions which were not as serious. It has since been shown that a person may pass albumin and casts for years and show practically no pathologic change in the kidneys.

The test which has recently enabled the clinician to diagnose quite accurately the efficiency of the kidneys is the phenolsulphonephthalein test of Rowntree and Geraghty. This test is based on the fact that a normal kidney has the power of eliminating a fairly constant percentage of this dye in a given length of time. The efficiency of the kidney is estimated by the amount of this dye eliminated in a given period. This method furnishes remarkable results as to renal activity, if an examination of the blood is made in connection with it.

The test is performed as follows: thirty minutes before the test is begun the patient receives 400 to 500 c.c. of water; this is given in order that good diuresis may be secured. The patient next receives hypodermatically into the deltoid muscle 6 mg. of phenolsulphonephthalein. The patient is then instructed to empty his bladder at once. This may be done by means of a catheter if there should be any obstruction. The urine is collected for a period of two hours and ten minutes in two receptacles; the first receptacle to contain the urine passed the first hour and ten minutes; the second receptacle, the urine passed the second period. The ten minutes is added to the first hour because it takes approximately that long for the dye to appear in the urine.

It has been noted that the healthy individual will eliminate 40 to 50 per cent. the first hour, and 20 to 25 per cent. the second hour. In diseased conditions of the renal epithelium the eliminating power of the kidney will be much decreased.

*Conclusion.*—From what has been said above, it is apparent that the research laboratory may increase the efficiency of the average practitioner almost to the point of finality. However, this, as in many other branches of science, depends on the thoughtful cooperation of the physician and the laboratory men concerned.

## CARCINOMA OF THE PROSTATE\*

ERNEST G. MARK, M.D.

AND

HARVEY E. MCCARTHY, M.D.

KANSAS CITY, MO.

It is the purpose of this short article to review but very little of the mass of literature on this most important subject and to pass on to the more practical points; viz., the symptoms, diagnosis, treatment and prognosis of this condition.

Cancer of the prostate was first recognized by Langstaff in 1817. It was not until 1867, however, that the first operation for carcinoma of the prostate was performed by Billroth and two years later by Jolly. In 1900 Albarran and Halle gave us our first intimation of the relative frequency of prostatic carcinoma. Since that time there have been numerous reports of carcinoma tissue findings in hypertrophied prostates. Walker found carcinoma in 16.5 per cent. of his cases, while Young in 500 cases of prostatic obstruction gave his findings at 20 per cent. The consensus of opinion seems to give a percentage from 14 to 20 and we do not doubt that this also would be increased by study of our enucleated prostates under the microscope, as carcinoma in this organ should follow the rule as in any chronic inflammatory condition which subjects it to ever constant stimulation.

Robert C. Bryan in his most excellent article in *Surgery, Gynecology and Obstetrics*, 1912, divides prostatic carcinoma into three classes of cases:

No. 1.—The precancerous or early intramural invasion associated with or independent of a benign hypertrophy. This category of cases can only be revealed in the laboratory. There are no physical signs, subjective or objective, signifying malignancy. The operation is performed in good faith for hypertrophy, the results are clean and the prognosis is good.

No. 2.—At that moment that the cancer establishes itself peripherally, becomes subcapsular and there is an invasion backward along the ejaculatory ducts, involving the seminal vesicles and establishing anteriorly about the bulb with a fixed urethra, nodulation and induration, evidencing a varying consistency of the organ, coupled with a history distressed by pain, hemorrhage, or weakness, the condition of prostatic cancer is now in its second stage and it is essentially at this time, or varying phases of this period, that the surgeon is called on for diagnosis.

No. 3.—This category is that of a progressive or marked cachexia and anemia, where the pain or hematuria have been persistent and uncontrollable. Osseous and lymphatic metastases

\* Read at the Fifty-Ninth Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 8-10, 1916.



are evident, urinary embarrassments imperious and harassing. The gland is now so greatly enlarged and involves its neighboring viscera to such an extent that it requires attention, not for removal but to relieve those conditions which such an increment has brought about. This stage is the prostatopelvic carcinosis of Guyon.

It is the authors' intention to deal solely with the second and third stages of this classification, or the clinically recognizable carcinoma, but as a last word we should impress a thought of the possibility of cancer in all senile hypertrophies and suggest a routine specimen examination under the microscope and so be more able to give a definite prognosis and at the same time be prepared to meet the metastatic conditions should they arise.

*Symptoms.*—The usual manifestations of hypertrophy of the prostate are generally present in carcinoma but superimposed on these we will find, if we go into the history carefully, that there has been a slow but persistent loss of weight with no accountable reason, although the entire loss may not exceed 15 or 20 pounds; also that the sexual act, which up to that time was only diminished, was suddenly found to be impossible or was so extremely painful that it was avoided.

The next symptom, as the disease progresses, is that of urinary frequency and is probably the one most spoken of by the patient. This is the symptom that usually causes him to look for scientific diagnosis. Frequency occurs in at least 75 to 80 per cent. of the cases and is caused by the encroachment of the carcinomatous condition on the bladder. Frequency, although an early and practically constant symptom, is not typical of carcinoma.

*Pain.*—This symptom is one which must often give us our clue for diagnosis and is referred to by the patient as pain in the back which on questioning we find to be a sacroiliac pain that is continuous and not dependent or necessarily connected with the act of micturition. Laterally, on more extensive bladder involvement, this pain is increased and referred to the bladder and deep urethra on micturition. Pain also, according to the advancement of the process, may be located in the perineum, rectum, scrotum, posterior urethra and bladder or extend down into the thigh or knee, simulating a sciatic involvement.

Hematuria, of course, occurs but usually in the late stages, but we are more liable to find a history of postmicturitional hemorrhage. Considering the fact, that carcinoma is in the beginning unilobar, it may or may not be associated with hypertrophy, therefore absolute retention is the exception rather than the rule.

*Diagnosis.*—This is made on the presence of any or all of the foregoing symptoms and the rectal examination which reveals a nodular,

hard, usually enlarged prostate with reduced motility, extending upward and backward along the seminal vesicles and their fascial investments.

There is an unusual amount of pain and bleeding on introduction of the cystoscope which shows a generalized cystitis and a vesicular impingement on the trigon, also in quite a number of cases ragged ulcerations in the posterior urethra.

*Treatment.*—The best recognized and practically the only operation thought of in clinically recognizable carcinoma is that of Young with the removal of the prostate, vasa differentia, seminal vesicles, and anterior two thirds of the trigon, but there is a question that arises in our minds—is such an extensive radical procedure indicated in *clinically recognizable* cases?

In a review of the six cases in which radical methods were used, given by Young in his report of his study of carcinoma, we find the following statistics:

Case 1, recovered operation but died nine months later, and at necropsy showed recurrences.

Case 2, lived six weeks after operation and did not show recurrence.

Case 3, died three years after operation and showed recurrences.

Case 4, lived four and a half years and necropsy did not show return.

Case 5, died of shock.

Case 6, was only operated six months previous to report.

To arrive at a definite conclusion, we must not only think of the fact that we are removing the pathological tissue in full or in great part but also of the fact that we are working directly with and traumatizing to a great degree this tissue, thereby opening up untold areas for absorption, and directing into the blood stream cancer cells that cannot but promote metastasis in other tissues, consequently hastening an eventual result.

The physical condition of such patients presenting for operative interference is not such that one can feel really justified in performing such a radical operation as has been suggested by Young, and expecting even a half of them to recover from the coincident or consequent shock.

Such patients have not only the natural pathology of prostatic hypertrophy, viz., infection, kidney function lowered, etc., but also the anemia and low vitality which accompany all carcinomatous conditions.

It is our desire and intention, in spite of the brilliantly conceived operative procedure of Young, to go on record against such radical measures in clinically recognizable carcinoma of the prostate. Palliative measures not only retard the growth by decreasing stimulation but



at the same time do not subject the patient to the enormous shock, concomitant or induced by the extensive radical procedure, and best of all allows him to live his allotted time of six months, one year, eighteen months or two years in a fairly proportionate amount of peace and happiness. Palliative measures, in our mind, consist of first, in suprapubic drainage, second, in local antisepsis, third, in massive doses of the Roentgen ray.

In the *Journal of the American Medical Association*, Feb. 15, 1913, one of us (Ernest G. Mark) presented a drain which was devised for these conditions. In the past few years we have improved on this drain by adding a few minor details and believe that it is the most feasible and comfortably worn drain now in use. Owing to several points that have been brought to our minds by supposed failures of this drain to prove efficient, we feel it not amiss to add here a few necessary details in the placement of this drain.

First, it is not meant for a convenience following prostatectomies or for temporary drainage.

Second, drainage apparatus should not be adjusted until the permanent sinus is formed, usually ten days to two weeks after operation. Previous to this time drainage is followed out as usual with tubing and bedside bottle; temporary tubing in the bladder should be as near the size of the permanent drain as possible; by so doing we form a sinus exactly fitting the drainage apparatus.

Third, the colostomy pad, or rubber ring, should never impinge in part on the symphysis pubis, the opening being made higher up, because, should the pad so impinge with the stationary symphysis and movable abdomen, we have a poorly fitting pad with a resultant leakage around the edges.

Fourth, the entire closure procedure should be as any other abdominal closure. The bladder, with the exception of the permanent sinus, should be closed with inverting stitches, using twenty-day gut; bladder to be attached, by mucosa to serosa stitch, to the fascia. The skin also should be attached to the fascia. This forms a mucous membrane sinus with a small skin dimple which gives a natural drainage back into the bladder of any escaping fluid.

Fifth, great care should be exercised in fitting the tube of the drain as to its length. In the first place if the tube is too long and touches the bladder base it will not drain properly and will also cause a certain amount of inflammation and resultant pain and cannot be worn with ease. Each tube should be tried for a few hours and cut off until the proper length is obtained, wherein we get the best drainage. If this is done there will be an assurance of no pain as the best drainage is given from a tube which just enters the bladder cavity.

Sixth, in case of carcinoma advancing so as to cause urethral leak a penile urinal may be attached by use of a "Y" glass tube to the suprapubic drain.

*Conclusions.*—1. That no lives are saved or complete recovery made by radical operations in cases of clinically recognizable carcinoma.

2. That no matter how extensive the procedure, the carcinoma is not eliminated and by the traumatizing we increase rather than decrease metastatic possibilities.

3. That palliative measures, viz., drainage, Roentgen ray and antisepsis, do retard growth of the carcinoma, and do not open up more than the natural means for metastasis.

4. That a proper drain, properly fitted, does away with most of the pain coincident with cancer of the prostate and allows the patient a reasonable existence for the remainder of his allotted time.

626 Lathrop Building.

#### DISCUSSION

DR. CLARENCE CAPELL, Kansas City: I believe that we are just a little bit surprised when we realize the percentage of these cases that are cancerous when the prostate is removed, and such cases, like all prostatic cases, are preceded by a long period of suffering and pain, and the ultimate result is almost always doubtful. So when we have a prostate case I believe the thing to do if we cannot diagnose the condition as cancerous, is to operate; if we are certain it is cancerous, not to do so.

In these permanent drainage cases it is well sometimes to tell the failures we have had. I thought at one time I had made a very wonderful discovery. I thought I could make a spout out of skin that would conduct the urine over into the urinal, for in the very best appliance there is likely to be some seeping under the edge of the urinal resulting in discomfort from the irritating urine trickling down the limbs and the very disagreeable odor.

This was the plan that was followed: under local anesthesia two perpendicular parallel incisions were made two inches long and one inch apart, over the bladder through the skin and subcutaneous tissue. The strip between the incisions was dissected free and folded together transversely to make the spout. The redundant skin on each side was cut away and the edges sewed together. After the wound from this preliminary operation was entirely healed, the bladder was opened with a cross incision and the tube inserted in such a way that the permanent opening in the bladder would come just above the center of the flap or spout.

A similar expedient may be tried where the kidneys are to be drained through the loin. The flaps could be made at the preliminary operation on the back and at a later operation when the ureters are brought up a hole could be made in the end of the flap and the flap split and the ureter drawn through and sewed, making a sort of a teat. I believe infection would be less likely to pass up through this projection than through a funnel-like depression in the back. These skin projections would help convey the urine into receptacles worn on the back for the purpose.

So far as I can learn no one else has ever attempted these operations. I will admit that in the few cases in which I have attempted them the results have been rather disappointing. Possibly with further experience they may be improved.

# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

FEBRUARY, 1917

### EDITORIALS

#### CHIROPRACTOR BILL DEFEATED IN THE HOUSE—OTHER BILLS

The Chiropractor Bill (H. B. No. 8) was refused engrossment in the House on January 19 by a standing vote 58 to 56. The chiropractors were on the ground at the capitol long before the General Assembly met and within a week after the opening of the session their bill was introduced by Mr. E. A. Shannon, Representative from Audrain County. The bill was referred to the Committee on Criminal Jurisprudence of which Mr. Shannon is the chairman. The other members of the committee are: Ross E. Feaster, Henry County; Joshua C. Bradley, Macon County; H. Clay Heather, Marion County; Jack D. Robinson, Buchanan County; B. T. Gordon, Clay County; James N. Sharp, Bates County; Nick T. Cave, Callaway County; James W. Settle, St. Louis County; L. H. Lewis, Crawford County and John W. Campbell, Cedar County.

A hearing was held on Tuesday night, January 16, and arguments against the passage of the bill were made by Dr. A. H. Rickhoff, Representative from Osage County; Drs. R. M. Funkhouser, J. Frank Harrison, W. A. Clark and others. A large delegation of chiropractors was present and spoke for the passage of the bill. On January 17, by a majority of one vote, the committee reported the bill favorably and recommended that it do pass. This placed the bill on the calendar, and on January 19 it was read the second time and a vote to order its engrossment was taken. In the discussion before the vote was taken Mr. Feaster of Henry County introduced two amendments which were adopted, and Mr. Wilkinson of Jackson County introduced an amendment which was also adopted. The discussion was quite spirited. Mr. Shannon, the author of the bill, of course spoke in favor of its passage. He said we have these people with us and therefore there ought to be some law regulating their practices. Dr. Guy B. Mitchell, Representative from Taney County, made a strong speech against the bill, and Dr. Rickhoff also made a forceful talk against its passage. When the discussion closed a standing vote was taken to engross the bill,

which resulted in 56 for, 58 against engrossment. On January 24 Mr. McPherson of St. Louis City moved to reconsider the vote on H. B. No. 8, and then yielded the floor to Mr. Shannon, the author of the bill. Mr. Shannon made a nice speech for the chiropractor's bill, but his eloquence failed to carry conviction, and after physician members of the House had voiced their opposition to the measure the motion was lost by a vote of 76 to 50. This effectively kills the measure for this session, as it is not possible to reintroduce it in the House, and the Senate is not likely to consider a bill that the House has refused to indorse. Dr. O. L. Castle of Kansas City went to Jefferson City to be present at the hearing, but was compelled to return home before the meeting of the committee. He spent the day among the representatives from his district and explained the dangerous nature of the bill. All the physician members of the House worked loyally to discourage the passage of the bill.

The day before the vote was taken on the chiropractor bill, Mr. Jack D. Robinson of St. Joseph, representing the 4th district of Buchanan County, introduced H. B. No. 380 "to repeal all of Article 1, Chapter 73 of the Revised Statutes, 1909" and enact a new article. This is the medical practice act under which we are at present working. Mr. Robinson also introduced H. B. No. 381 "to amend Section 6652 of Article 1, Chapter 53, R. S. 1909," the section which defines the qualifications of the physicians who may be appointed members of the State Board of Health. The purpose of the bills is to create three medical examining boards, one for the "allopaths," one for the homeopaths, and one for the eclectics. The provisions of these bills would seriously interfere with the present stringent control over the kind of doctors permitted to practice in this state and therefore they ought to be defeated. The Council on Health and Public Instruction will oppose their passage.

The Optometry Bill is H. B. 312. At this writing it has not been referred to committee, but the members will be kept informed of its progress. We have put forth every consistent effort to enlighten the lawmakers concerning the fallacies of the bill and expect to prevent its passage.

The bill to establish a board of control for state hospitals has been completed and copies will be sent to the county societies. It will be an administrative measure, as Governor Gardner is very anxious to place these institutions upon a sound business basis in regard to their financial management, and also to create a system of administration which will insure the appointment of competent men at the heads of the institutions without political interference.



## CONSTITUTIONAL CONVENTION

Two bills providing for submitting to the voters of Missouri the question of calling a convention to frame a new constitution have been introduced in the General Assembly. The House Bill is Bill No. 1 and was introduced by Representative Dumm, and the Senate Bill is Bill No. 4 and was introduced by Senator Casey. The two bills are identical and provide for a special election to be held on the fourth Tuesday in June, 1917, at which the voters will pass upon the question as to whether a constitutional convention shall be called. If a majority of the votes cast is in the affirmative the Governor of the state must call an election, within six months following the first election, at which delegates to the convention shall be chosen. These delegates, meeting ten weeks following their election, frame a new constitution, which is submitted to the voters for approval or rejection. The bills introduced follow the provisions of the present State Constitution regarding procedure.

It is not necessary to urge upon Missourians the need of a new State Constitution. Both political parties have indorsed the submission of the question, and the Press, almost without exception, favors it. Many state-wide organizations, including the State Teachers' Association, the State Press Association, State Bankers' Association, Federation of Labor, Federation of Missouri Commercial Clubs, State Bar Association, Missouri State Medical Association, League of Missouri Municipalities, Missouri College Union, State Good Roads Association, and many of the agricultural associations are giving the movement for a new constitution their cordial support. A new constitution is fundamental to the progress of all Missouri along economic, social, educational and government lines. The General Assembly should, and we believe will, give the people a chance to vote upon the question. Members favoring the passage of these bills should write their senators and representatives to support them.

---

### THE PSYCHIATRIC CLINIC AS AN AID TO THE COURT

The Commission on Misdemeanants appointed by the Mayor of St. Louis has, after three months of careful study, made its report with recommendations regarding the more appropriate and satisfactory handling by the city of this class of dependents. The Commission with the following members, Judge J. Hugo Grimm, chairman; Jessie L. Moller, secretary; Dr. M. A. Bliss, Mr. Augustus L. Abbott and John B. Denvir, Jr., recommended in the main two fundamentally important things: the establishment

of a municipal farm to replace the present city workhouse, and the examination into the mental status of misdemeanants.

The growing recognition of the importance of an adequate investigation and study of the intellectual ability of those who came within the purview of the law seems as an indicator of the rapid strides which social psychiatry is making. Here and there municipalities and states are awakening to the importance of the knowledge of the mental stuff out of which crime grows and psychological study of such individuals has wherever tried been of the greatest service to the court in its determination of the quantity and quality of punishment to be awarded.

That there should be a complete, properly equipped and manned, psychiatric clinic acting in conjunction with the court in a city of the magnitude of St. Louis is easily apparent to anyone who deals in any way with either the legal or medical phase of crime. It has been estimated that approximately half of the population of our penal institutions is not fundamentally criminal, but only vicariously so as a result of mental deficiency—feeble-mindedness. Punishment for crime is meted out on the theory that the individual punished possesses a mind by the functioning of which a realization of the punitive character of the penalty may be attained. The law assumes that we are born free and equal. As a fact all are enslaved to their environment and the mentally deficient person is by no means the equal of his more highly endowed brother. The human race is absolutely limited by its mental horizon and one cannot through his own activities alone rise above the level of his mental stock. The penalty set by the court on the mentally normal law breaker is not suitable for the punishment of the mental defective guilty of the same offense. To get the best results it is then apparent that we must understand the individual whom, according to the present ideas of penology, we are seeking not to punish but to reform and remake into a citizen of economic value to the community. The only way that such an understanding can be attained is by a thorough study of that individual upon whom we plan to use our reformatory reagents. The chemist to anticipate with any degree of certainty what the end-result of a chemical reaction will be must know the reagents which are employed. In an analogous manner it is just as necessary that the court know the individual and his mental reactive type before it can presume to predict what the effect of the penalty imposed will be. Mind has been defined as that organ by the functioning of which man is adapted to his environment. The asocial and antisocial traits of criminal behavior clearly reveal this lack of environmental harmony which for community

life is essential. In crime we see the results of intelligence defect. Three fourths of the recidivists or repeaters in our courts, and they comprise almost 50 per cent. of misdemeanants, have been shown to belong to the mentally deficient classes. To properly care for these repeaters alone would relieve the court of an enormous volume of work, would be an economy to the city and, what is more to the point, would do more to benefit the individual than anything which our present inadequate and rapidly becoming obsolete methods of dealing with misdemeanants can possibly offer. If there be any means by which the court can be put in possession of a scientific knowledge of the mental caliber of the individual haled before it and with such knowledge pass more intelligent judgment in the case, such aid should be most carefully sought out and enlisted on the side of justice at the earliest possible moment. The experience of other communities has clearly demonstrated that such aid is to be found in the psychiatric clinic established and working in connection and in harmony with the court. It behooves every community to provide such an arm to the law, and St. Louis as one of the largest cities of this nation should not be slow to take its position in the lead of the movement.

#### A \$5 FEE FOR LIFE INSURANCE EXAMINATIONS

The question of fees for examining applicants for life insurance is agitating the profession in several sections of the state. It is an important phase of practice and forms a proper subject for discussion and action by the county and state medical societies. It seems to be well established that \$5 should be the minimum fee for an examination for corporate life insurance companies, but there are many companies that refuse to pay more than \$3, while at the same time they demand first-class service and usually try to obtain physicians well known in their communities as competent and trustworthy practitioners. They place confidence in their examiners and ordinarily accept their reports, but they set their own prices on the value of these services. While there may have been a day when the examination for life insurance was not worth more than \$3, that time has surely passed, for such an examination today requires much more skill and knowledge than it did in former years, but the fee remains the same in some of the companies.

This question has been settled in Texas and Kentucky by the organized profession adopting a rule that a minimum fee of \$5 shall prevail for all life insurance examinations in old line companies, and in at least one county of our

state (Chariton County) by all the physicians agreeing to adhere to the \$5 basis. For the information of our members we publish the resolution adopted by Chariton County. All companies have responded to the demand and now pay \$5 to the physicians in Chariton County.

As in all other questions affecting the profession as a whole, unanimity must prevail in this question in any county desiring to raise the fee for life insurance examinations, and all the physicians must adhere to the rule if it is to become effective. The resolution follows:

At a meeting of the Chariton County Medical Society, held at Brunswick, Mo., July 13, 1916, the following resolutions were unanimously adopted:

That the following preamble and resolutions are adopted by this society in regular session:

WHEREAS, Many of the life insurance companies have notified their medical examiners of the reduction of examining fee from \$5 to \$3 and

WHEREAS, We, as physicians, realizing the responsibility incident to a proper examination of the individual, believe such reduction to be unjust; therefore be it

*Resolved*, That the Chariton County Medical Society, and the profession in sympathy with them, in session assembled, do hereby declare such reduction to be unjust, and respectfully request that no physician legally authorized to practice medicine in this county of Chariton, state of Missouri, accept such reduction of fee; and further, that any physician accepting such reduction be guilty of breach of professional courtesy.

*Resolved*, That it is the sense of this society that the minimum fee for each old line life insurance examination shall not be less than \$5.

*Resolved*, That for all examinations for fraternal organizations for life insurance the fee shall not be less than \$2.

That the above rates shall not apply to industrial medical inspection without urinary analysis, for amounts less than \$1,000.

That no member of this society enter into any contract or agreement with any corporation, society, association, company or individual, to examine applicants for insurance for any stated salary or lump sum, thereby evading the spirit and instinct of the foregoing resolutions.

That the payment of all fees shall be authorized by the home office of the society or corporation to which such application is made, and under no circumstances shall an examiner receive or accept any part of this fee from an agent or any other person or corporation, unless the full fee be paid by authority of the home office.

Further, that each member of the Chariton County Medical Society in good standing when this resolution was offered does bind himself, by his signature, to this original resolution to abide by the same.

That each member of the Chariton County Medical Society shall be presented with at least twenty-five copies of this resolution, that he can present the same to the companies through their agents that may call on him to examine applicants for them.

The above resolution read and adopted by unanimous vote of the Chariton County Medical Society in regular session at Brunswick, Mo., on Thursday, Sept. 14, 1916, the same to be in full effect on and after Nov. 1, 1916, in Chariton County, Mo.



## PAPERS FOR THE ANNUAL SESSION

Members desiring to read papers at the Sixtieth Annual Session of the Association should communicate with the program committee and give the title of the paper. The committee will follow the precedent established by previous program committees and give preference to members who have not read a paper at either of the two sessions immediately preceding. It has been decided to limit the number of papers to thirty-six, as the experience of many years demonstrates that it is impracticable to read more than that number and allow reasonable time for discussion. Every member who accepts a position on the program is expected to be present and read his paper when it is called. The meeting will convene at Springfield, May 14, 15 and 16. The members of the committee are Dr. J. P. Henderson, Argyle Bldg., Kansas City; Dr. W. C. Gayler, Humboldt Bldg., St. Louis; Dr. E. J. Goodwin, secretary, 3517 Pine St., St. Louis. A request addressed to any member of the committee will have prompt attention.

WESTERN SURGICAL ASSOCIATION  
MEETING

The recent meeting of the Western Surgical Association, held at St. Paul, Minn. on Dec. 15-16, 1916, proved to be one of the most successful in its history. This organization of strictly limited membership has done much in recent years to bring Western surgeons to the fore.

The program presented at the meeting was of an exceptionally high character. As guests there were present Dr. Fred Albee and Dr. H. G. Gant of New York. Dr. Albee's lecture on "Bone Surgery" was interspersed with reminiscences of the allied front in France and was most entertaining and instructive. His description of the treatment of lacerated wounds and compound fractures with Dakin's solution, and the use of bone grafts were exceptionally valuable.

The address of the president, Dr. Lawrence W. Littig of Davenport, Iowa, on "Hospitals and Hospital Organizations," was particularly timely. He censored the evils of the open hospitals where anyone could work, and urged that hospitals should insist on undoubted surgical qualifications before permitting men to do their work in the hospitals. In this he undoubtedly touched the greatest evil of the present open hospital where the merest amateur in surgery can take a patient and be sure that because of the ethics of the operating room, his shortcomings and mistakes will never be known.

A number of Missourians contributed papers. Dr. Herman E. Pearse of Kansas City reported two cases of adrenal cysts. Dr. A. E. Hertzler read a paper entitled "Factors which Determine the Extent and Duration of Peritoneal Adhe-

sions." Dr. Roland Hill of St. Louis gave a paper on "Posture in Abdominal Drainage." Dr. F. T. Murphy of St. Louis presented a paper on "Lacerated Wounds," and Dr. William T. Coughlin of St. Louis reported a case of the "Ligation of the Innominate Artery."

The following officers were elected for 1917: Leonard Freeman, Denver, president; Joseph Ranshof of Cincinnati, first vice-president; Roland Hill, St. Louis, second vice-president; Arthur T. Mann, Minneapolis, secretary and treasurer. The next meeting will be held in Omaha in December, 1917.

## DOCTOR PHILIP MILLS JONES

How few of us can do things that others cannot. Were you or I to die tomorrow what difference would it make? Our immediate relations might mourn perhaps, and the man whose appendix we removed yesterday might feel distressed at the idea of the interne's doing the dressings while your successor was being sought; your wife, perhaps, would have to economize, perhaps even give up the car—but at bottom, what difference would it make? Do you think that the doctors who inherit your practice would not attend your patients just as well as you did, or better—is there anything that will stop, anything that will be left undone because you are dead? No—Stevenson's "To be honest, to be kind" is a modest demand, indeed. It takes more than that, and other than that; and the being honest and kind may not be so essential to a man's worth at all.

Work, that is the thing. And how few do work that others cannot; make things, do or write or say things that others cannot.

It was strange to pass the state society's offices; they had that look of the unknown that sudden and shocking events impart to the most ordinary and intimate objects. To hear a typewriter rattling and to think of him who used to dictate—to see files and stacks of letters, malpractice suits and judgments coming in, and to think of him whom they used so vitally to interest. To think of the complex fabric of the state society that he had woven, the JOURNAL, the medical defense, and all he had done to bring the profession together, to think of questions critically concerning them, and of what they meant to him—and to us—his work lying undone, and he caring no longer.

Dr. Jones will be missed. Who is there to do his work? To combine law and medicine and organizatory talent; to bring to them an even and justly balanced intelligence, industry and a knowledge of dealing with men.

"To be honest, to be kind"—yes—but more than that—"Work while it is called today; for the night cometh wherein no man can work."

The night hath come, and we are groping for a guide.—*California State Journal of Medicine.*

## LEGISLATIVE NOTES

H. B. No. 8. Introduced by Mr. Shannon of Barton County. An act defining and regulating the science of chiropractic.

Refused engrossment by a vote of 58 to 56.

H. B. No. 312. Introduced by Mr. Hicks of Kansas City. An act to define and regulate the practice of optometry.

Referred to committee on judiciary. At the time of going to press the date of hearing had not been set, but the Association will be represented at the hearing to protest against its passage.

H. B. No. 376. Introduced by Mr. Lehr of Carter County. An act to provide for the inspection of all public or private hospitals, reformatory homes, houses of detention, convents, asylums, sectarian seminaries, schools or institutions by the county court.

H. B. No. 380. Introduced by Mr. Robinson of St. Joseph. An act to repeal all of Article 1 of Chapter 78, R. S. 1909, and enact a new article in lieu thereof.

This bill establishes three examining boards, to wit: The State Board of Medical Examiners of Missouri, the State Board of Homeopathic Medical Examiners of Missouri and the State Board of Eclectic Medical Examiners of Missouri. It is an effort to allow the sectarian schools to pass upon their own graduates, and would, if passed, admit to examination the graduates of the Eclectic Medical School of Missouri, which is now not recognized by the State Board of Health. The bill has not been referred to committee at the time of going to press, but the Association will oppose its passage.

H. B. No. 394. Introduced by Mr. Chancellor of Barton County. An act to establish county boards of public welfare.

This bill is one of the bills introduced by the Children's Code Commission and gives power to the counties to supervise the condition of poor, sick and distressed, and to administer the charitable and correctional institutions of the county; particularly to seek out and discover any cases of neglected, defective and delinquent children and secure for them the benefits of the laws enacted in their behalf. It should receive the support of our members.

H. B. No. 396. Introduced by Mr. Chancellor of Barton County. This bill directs what information the birth certificate shall contain. It was introduced at the request of the Children's Code Commission.

H. B. No. 397. Introduced by Mr. Chancellor of Barton County. An act to provide for the treatment and correction of delinquent minors of 18 years or over. This is another of the Children's Code Commission bills which should receive our support.

H. B. No. 419. Introduced by Mr. Warren of Grundy County. An act to provide for licensing and supervision of maternity hospitals and boarding houses for infants and children.

This bill places the licensing and supervision of maternity hospitals as a part of the duties of the State Board of Charities and Corrections. It should be supported by our members.

## OBITUARY

### DR. F. W. RATHBONE

I am sorry to say your committee failed to obtain data on which to base a detailed report, or biography of the life of Dr. F. W. Rathbone. Yet what difference does that make—he's what he was, as a man and physician that counts. The older physicians who knew him during his active life have only words of commendation. He is spoken of as a clean man—ethical in his deportment, and stood for the highest things in the life of the physician. He was not avaricious but contributed largely of his time to charity. Dr. Rathbone was born in 1856 in the State of West Virginia, graduating from Jefferson Medical College in 1883, coming almost directly to Kansas City, Mo., where he spent most all his time since then in the practice of his profession except the last eighteen months as an invalid in St. Joseph Hospital, where he died Sunday morning, Dec. 10, 1916. He was chief physician of that hospital for a number of years. He was also professor of materia medica and therapeutics in the Kansas City Medical College and in the University Medical College. He had been a member of the Jackson County Medical Society for twenty-six years. The Jackson County Medical Society extends its sympathy to his relatives and friends.

The least we can say of him is: He was worthy—well qualified, and did what he could along the lines of regular medicine. He visited the widow and the orphan without recompense, and he loved his fellow-man.

H. B. COLEMAN,  
JOKSHAN FREYMAN,  
W. H. COFFEY,  
*Committee.*

—From *Bulletin* of the Jackson County Medical Society.



## WILSON A. KENDALL, M.D.

Dr. Wilson A. Kendall, the only son of Moses W. S. Kendall and Clara Catherine, his wife, was born on Aug. 3, 1840, in Cincinnati, Ohio, where he received his early education, graduating from Woodward College in 1858. In 1859 he moved with his father's family to Bellevue, Illinois, where he spent several years. Subsequent to his leaving Cincinnati he studied law and was admitted to the bar. In 1867 he moved to Poplar Bluff, Mo., where he resided until 1914. In 1891 Dr. Kendall graduated in medicine and surgery from the Beaumont Hospital Medical College, St. Louis, at which time he also took out a state license to practice in New York and Arkansas. From the date of his graduation he followed his profession until ill health overtook him and he came to Griggsville, Ill., to make his home with his late sister's husband, Mr. Thomas Simpkins and family, with whom he remained until his death on Dec. 29, 1916.

Dr. Kendall was for many years a member of the Navy League in which as a good and patriotic citizen he took much active interest. He was a communicant of the Episcopal Church and an active attendant and supporter of the church in his home city. Until his health broke down, Dr. Kendall had always devoted himself to public work and was highly esteemed by the profession and the public.

He was an active member for many years of the Butler County Medical Society and the Missouri State Medical Association.

## DR. DAVID RITTENHAUSE PORTER

Dr. David Rittenhouse Porter was born in Jefferson County, Ohio, Nov. 23, 1838. Until his majority he gained his education in the country schools, select schools and hard knocks. He lived in that part of Ohio over which Spencer traveled and taught penmanship in evening schools in log school houses, which were then the order of the day. In 1859 he came west, and in his leisure time studied medicine under a preceptor, which practice was then in vogue. In 1861 before his private study under his preceptor was completed he enlisted in the 5th Regiment Volunteer Cavalry at Ft. Leavenworth. During the latter part of the war he became assistant surgeon of his regiment. His military services continued during the war, and in all that time he never lost a day through furlough or otherwise. He was graduated from the Keokuk College of Physicians and Surgeons in 1865, and at once came to Kansas City where he has since lived until his death Dec. 14, 1916, and practiced his profession which was then an arduous calling. In 1869, together with Drs.

F. B. Lester, S. S. Todd, E. W. Schauffler, A. B. Taylor, J. H. Van Eman, and others, organized and founded the old Kansas City Medical College, which in its time was of much value and benefit to this western country. In this school he held various classes for over forty years and was held in high esteem by the students of that old school. After the absorption of this school by the Kansas University he was a professor in that institution for several years. In 1872 he was graduated from the Bellevue Hospital Medical College, New York City. He was a member of the G. A. R. and of the Loyal Legion. He was for long years a member of the Missouri State Medical Association in which he served as secretary and vice-president, and a member since 1883 of the Jackson County Medical Society of which he was president in 1897. Of the members who then composed the society there are but ten left.

In civic life he was for many years active and always looking to the best interest of society and the public good. He served the city as a member of the common councils, and was city physician in 1870. He was a man of keen perception and sound judgment, honorable, absolutely honorable in word and deed with his medical brothers, never halting in his duties, but he was never ostentatious. "Take him for all in all, he was a man." This society now begs to express its deep sorrow for our companion's death, and to extend to his widow, Mrs. Ollie Emith Porter, and to his son, Pierre Porter, its condolence and sympathy.

H. B. COLEMAN,  
JOKSHAN FREYMAN,  
W. H. COFFEY,  
*Necrologic Committee.*

—From *Bulletin* of the Jackson County Medical Society.

## NEWS NOTES

DR. C. J. LUYTIES of St. Louis suffered a severe attack of paralysis several weeks ago, but is improving.

DR. D. H. HOPE of Cape Girardeau has been seriously ill for several weeks. He is reported to be improving.

DR. JAMES I. ANDERSON of Warrensburg was operated on recently at the University Hospital, Kansas City. He is slowly recovering.

G. W. SOLLARS, a chiropractor at Joplin, was fined in the circuit court for practicing medicine without a license. Several other cases are pending.

DR. E. H. MILLER of Liberty has been invited to appear before the Military Committee of Congress and give his view on military training in the public schools.

THE Board of Education of Mexico, Mo., has planned to employ a visiting nurse following the discovery of several cases of diphtheria, as a means of preventing the spread of contagious diseases among schoolchildren.

DR. E. H. BULLOCK of Edina has been appointed superintendent of State Hospital No. 2 at St. Joseph, to succeed Dr. W. L. Whittington recently appointed assistant physician.

DR. C. L. KATZ, a physician of Wichita, Kan., was sentenced to two and one-half years in the penitentiary. He was found guilty on eight counts of a charge of selling habit-forming drugs in violation of the Harrison Act.

JACKSON COUNTY MEDICAL SOCIETY has paid all the indebtedness on its property which was purchased several years ago. The property consists of a plot of ground on one of the principal thoroughfares and is improved with several buildings that produce a comfortable income.

"DR." JAMES CLEMENT, cancer "specialist" of Kansas City, has been brought back to Kansas City and is held in jail. He left Kansas City pending an appeal after being sentenced to a year in the penitentiary and fine of \$500 for falsely advertising a cancer cure. He was found in Idaho by federal authorities.

DR. G. E. MUNS of Montgomery City, secretary of the Montgomery County Medical Society, has been appointed a member of the Board of Curators of the State University for a term of six years, from Jan. 1, 1917, to succeed Dr. J. C. Parrish of Vandalia, whose term has expired.

WE invite the attention of our members to the announcement of the Victor Electric Corporation in the advertising pages. This is an old established firm whose dealings with the profession have always been of the most cordial and satisfactory nature. We welcome their patronage and we hope the members will give their attention to this company when contemplating the purchase of electric outfits and accessories. An attractive feature of the service furnished by this company is inspection of their apparatus from time to time after it has been installed.

ON Saturday, January 20, the Kansas City Board of Health opened a school of hygiene and sanitation where all employees of the health department will receive instruction. Attendance

of these employees is obligatory at the weekly meetings to be held on Saturdays. The employees of other departments having duties auxiliary to the health department will be invited to attend. At the opening session, Mr. G. H. Tefft, president of the Health Board, explained the purpose of the school. Dr. D. F. Lucky, state veterinarian, gave an address on "Animal Tuberculosis and Other Diseases Transmissible to Man," and Dr. Herman E. Pearse gave a talk on "Public Health and Civic Welfare." The season's program includes a series of five lectures by selected speakers.

A MEDICAL unit to be known as the St. Louis Unit of the American Physicians' Expedition Committee has been formed by physicians of St. Louis to go to the battlefields of Germany and Austria. Dr. W. C. G. Kirschner will be at the head of the unit, and will have associated with him Drs. B. W. Klippel, L. H. Bock and Allen Gilbert. Four nurses will accompany the party. They will sail from New York, February 7 on the *Frederik VIII*, and report to Ambassador Gerard at Berlin.

THE H. K. Mulford Company has issued a handsome special number of their *Digest* commemorating their twenty-fifth anniversary. The scientific spirit has always been a distinctive characteristic of the organization that contributed to the growth of this house and its output has been controlled by research work of a high order. In this pamphlet there are many illustrations showing the steps through which vaccines and pharmaceuticals pass to the stage of perfection ready for distribution, and there is an interesting article on "Sensitization of Typhoid Vaccine," by Dr. A. L. Garbat.

ON March 10, Dr. C. Lester Hall of Kansas City will complete fifty years of active practice, having graduated from the Jefferson Medical College on March 10, 1867. The Jackson County Medical Society and the Academy of Medicine of Kansas City have arranged to celebrate the occasion by giving a dinner in honor of Dr. Hall. Any member wishing to participate in the event should address Dr. R. M. Schaufler, Argyle Bldg., Kansas City, or Dr. Jabez N. Jackson, Argyle Bldg., Kansas City.

DR. O. C. GEBHART, St. Joseph, Councilor for the Second District, has returned from the Mexican border where he has been during the past six months in the service of the United States Army. Dr. Gebhart has the rank of major and was commanding officer of Field Hospital No. 1. He was an honored guest at a dinner given by the citizens of St. Joseph on January 8 to welcome the return of the hospital corps. Other members of the corps at the din-



ner were Drs. Charles Greenburg, Robert Dorsey and C. F. Martin. Dr. Daniel Morton, who organized the hospital corps several years ago, was toastmaster.

KANSAS CITY has divided its health department into two divisions—a hospital and a relief division and a health and sanitation division. Each division will be directed by a superintendent, and both divisions will be under the charge of a health director who has not yet been named. Each superintendent will receive a salary of \$2,400, and the health director \$3,000. Under the hospital relief division will be bureaus for the General Hospital, the Negro Hospital, the Emergency Hospital, the Isolation Hospital, Sanatorium for Tuberculosis, the hospital at the Municipal Farm and the Girls' Detention Home. Under the division of health and sanitation will be the bureaus for sanitary food and dairies, school inspection, dental inspection, garbage, and vital statistics. Dr. T. F. Miller will be superintendent of the first division, and Dr. G. F. Pipkin will be superintendent of the second division.

THE National Pathological Laboratories of Chicago and New York have established a laboratory in St. Louis to be conducted in all respects on the same high plain as the other two institutions where they are prepared to serve the profession of the state in everything that a fully equipped laboratory can do to assist the practitioner. Dr. Ralph L. Thompson, professor of pathology in the School of Medicine of St. Louis University, has accepted the position of medical director of the laboratory, but will retain his teaching position at the medical school. The National Laboratories are known to many of our members, as the company has advertised with us for a long time. We feel sure the profession will extend a welcome to the new laboratory. For particulars see their announcement in the advertising pages.

THE Children's Code Commission has introduced some thirty-five bills in the legislature to enact adequate laws for the protection and care of destitute and neglected children, delinquent children, defective children, child workers, statewide medical inspection of schoolchildren, protection of the eyes of new-born children, and establish county boards of welfare. These bills are constructive measures, and if passed, will place Missouri in the front rank of states giving intelligent attention to child life. The measures should be supported by the organized medical profession, as the work of the Commission has been indorsed by the Missouri State Medical Association. If members are in doubt about any bill on the above topics they can obtain information from their representative or from the secretary of the State Medical Association.

PHYSICIANS of St. Joseph have volunteered to assist the health department by giving their services free in the care and treatment of cases coming before the welfare board. The following physicians have been appointed for the hospital work of the board:

Internal medicine—Drs. J. M. Bell, George M. Boteler, C. A. Good, O. A. Schmid.

General surgery—Drs. John I. Byrne, L. J. Dandurant, John M. Doyle, H. S. Forgrave, Jacob Geiger, W. J. McGill, Floyd H. Spencer, L. A. Todd.

Genito-urinary surgery—Drs. J. J. Bansbach, T. M. Paul.

Obstetrics—Drs. A. L. Gray, A. J. Smith.

Eye, ear, nose and throat—Drs. P. P. Fulker-son, W. L. Kenney, W. H. Minton, W. C. Proud.

Nervous diseases—Drs. C. R. Woodson, W. L. Whittington, Herbert Lee.

THIS is the time of the year to go over your books and see if there are not some accounts that should be collected. Members have doubtless tried to close up their books and in many cases have been disappointed in the service of collectors or companies promising large returns for small payments. There is one company which has demonstrated its ability to collect many accounts that seemed to be hopeless, but more than that, its managers have exhibited to an unusual degree the exercise of common sense and courtesy in performing a disagreeable task. Physicians who have patronized the Publishers' Adjusting Association of Kansas City have never been disappointed with the service. In this issue you will find a page announcement of the Publishers' Adjusting Association explaining in full the kind of service they are prepared to render. We are assured of the high standing and unfailing integrity of this company and therefore take pleasure in directing the attention of our members to this important aid to the business side of the practice of medicine.

## MEMBERSHIP CHANGES, JANUARY

### NEW MEMBERS

W. D. Brown, Carthage.  
Otis Broyles, Chula.  
Luther P. Carlyle, Chula.  
Alfred Collier, Avalon.  
E. L. Cox, Glenwood.  
Clarence M. Grace, Chillicothe.  
J. D. Guyot, Bucklin.  
Roy R. Haley, Brookfield.  
Charles F. Isley, Excelsior Springs.  
J. E. Jordan, Columbia.  
G. G. Kaemmerling, Joplin.  
O. C. Kneedler, Conway.  
George L. McCutchan, Maywood.  
M. Mesropean, Chillicothe.

Roy K. Ogilvie, East Prairie.  
D. S. Pollard, Cowgill.  
Marion W. Rogers, Princeton.  
J. F. Rupe, Smithville, R. D.

#### CHANGE OF ADDRESSES

C. W. Bassett, 616 Washington to 1927 Railway Exchange Bldg., St. Louis.  
E. H. Bullock, Edina to St. Joseph.  
Richard Callaghan, 540 Cambridge St. to 6900 Wabash Ave., Kansas City.  
O. W. Clabaugh, Green Ridge to Sedalia.  
Harry S. Conrad, Physician's and Surgeon's Bldg. to Schmid Bldg., St. Joseph.  
H. DeLamater, Kansas City to St. Joseph.  
J. M. Doyle, Corby-Forsee Bldg. to King Hill Bldg., St. Joseph.  
Roy H. Ferguson, Moberly to Los Vegas, New Mexico.  
Freeman L. Finley, Anniston to East Prairie.  
Roland Fisher, Barnard Free Skin and Cancer Hospital to 3854 W. Minister Pl., St. Louis.  
Thos. E. Graham, Chula to St. Louis.  
Henry G. Greditzer, 5338 Von Verson to 5567 Waterman Ave., St. Louis.  
George W. Harmon, Elk Creek to Purdin.  
Edward F. Higdon, Richmond to St. Joseph.  
R. F. Knowles, Brunswick to Mayview.  
Gustav A. Keeln, Columbia to St. Louis.  
R. F. Mills, Mayview to Odessa.  
Harry G. Nicks, 933a Goodfellow to 975 Hamilton Ave., St. Louis.  
C. V. Smith, Tipton, Ind., to Detroit, Mich.  
Edwin A. Tufts, St. Louis to Arkansas City, Kan.  
Marcus L. Underwood, Brimson to St. Joseph.

#### REINSTATED

Henry T. Byars, Caruthersville.  
Edward E. Evans, Mercer.  
L. M. Gray, California.

#### DROPPED

M. J. Freeman, Wayland.  
A. J. McLaughlin, Aldrich.  
W. T. Myers, Greenfield.

#### TRANSFERRED

A. N. Bobbitt, to California State Medical Society.

#### DECEASED

H. C. Lundy, Pleasant Hope.

## MISCELLANY

### MEMBERS, ATTENTION!

The program committee is anxious that our society have a program each meeting, such that all members will be interested, and will not feel that the evening has been wasted. It will, however, be necessary to have the cooperation of every member, and we are more than willing to accommodate the members in allowing them to choose their own time for papers or clinics. We should be glad to have volunteers,

but realize that this alone would not fill the program. So it will be our intention to personally call on each member and obtain, if possible, a promise of a paper on this year's program. Nothing is more discouraging than the absolute refusal of a member to serve on our program, and yet it is equally as bad to depend on someone and then at the last day when we ask for the subject to have that person give us the answer that he knew nothing of his being on the program or that he hadn't time to write his paper. We realize the writing of a paper requires some effort, and yet the busiest men of our profession do the most writing. It behooves each member to come to the assistance of the program committee, if we are to have a program worth while. We are acting as servants of the society, and we do hope we may have the support of every member and that enough will be promised to serve that the program can be arranged ahead. If possible, we will have as many medical papers as surgical, so that each meeting will be inviting and interesting to every member whether an internist or surgeon. The members who desire to read papers will find the program committee most accommodating and will do everything possible to arrange the program to suit the convenience of the member taking part.

We want clinics and will be glad to arrange the time for presentation suitable to the patient.

Yours truly,

PROGRAM COMMITTEE.

—*Bulletin of the Buchanan County Medical Society.*

### A STEP FORWARD

The society, at the meeting of December 16, by a unanimous vote instructed the council to take the necessary steps toward the establishment of a business bureau to be conducted by the society. This action by our organization is in keeping with the present day trend in medical affairs.

Consider medicine a science, an art or a profession as you like; it is a combination of all these but with the advent of the Workmen's Compensation Law the growing tendency, fostered by large commercial interests, to contract practice and the attempts within our own ranks to establish superior groups supported by unlimited wealth, medicine is rapidly becoming commercialized. Medical service is now an industrial commodity. The profession has been slow in accepting the new order of things while the industrial world has been and is actively promoting the change with scant consideration for the interests and welfare of the medical fraternity.

The bureau to be established will conserve your financial interests, protect you from imposition at the hands of dead-beats and encourage a better understanding between the public and the medical profession.

Among the benefits to be derived are the following:

1. Giving you a confidential rating on a patient by 'phone.
2. Collecting your current accounts.
3. Collecting your old accounts.
4. Sending you a monthly statement of amount collected with check for the amount, less the cost of collection.

It will be your duty to

1. Send your bills monthly. Send in your list of delinquent debtors promptly.
2. Turn over your accounts to the bureau for collection.
3. Request cash for service rendered listed debtors.
4. Urge listed debtors to pay the account for which listed.
5. Furnish the bureau with any new facts of use in the collection of listed accounts.



Membership in the bureau will include all members of our society who will agree to support the work and furnish required information. Any physician of reputable standing in the profession may become a member of the bureau by payment of a nominal cost fee. Dentists, hospitals, etc., may have the advantages of the bureau for a nominal cost fee.—*Bulletin St. Louis Medical Society*.

### GOVERNOR GARDNER'S PLATFORM

Governor Gardner is now in office; he was, by his own express desire, inaugurated on the Capitol lawn. The new administration begins in the open; and those who like signs and portents may well pause on this characteristic fact.

The Governor's program is before us; it is an exceedingly clear and simple one and may be easily summarized. It calls for:

Taxes sufficient to pay off the deficit and provide revenue adequate to the state's future needs.

A Tax Commission, to do away with the farce of gathering up a miscellaneous set of busy officials elected for totally different tasks, calling them a Board of Equalization, and loading on their shoulders the duties of a commission of tax experts. If the Governor's recommendation carries, the Tax Commission will do a necessary work which now goes undone, and the present board will simply give force and effect to the commission's findings.

A central board to take charge of all our penal institutions in place of the ten boards now existing. them, and the appropriation of \$750,000 in addition to the income from the institutions themselves.

A central board to take charge of our eleemosynary institutions in place of the ten boards existing.

The utter elimination of partisan politics from all state institutions.

The creation of a State Highway Department which will meet the requirements of the Federal road law and so obtain the \$2,500,000 available for Missouri during the next five years under that statute, and the imposition of additional automobile and other taxes to give us \$2,000,000 for road improvement under state direction during the coming year.

The several parts of this program fit together like the timbers of a truss. Without the revenue laws nothing can be done. Without the road laws the problem of prison labor cannot be solved satisfactorily.

The program drives straight at the four crying needs of Missouri today—financial rehabilitation, prison reform, efficient and nonpartisan control of state eleemosynary institutions, better roads. It has not been made by a single individual "caucusing with himself;" it is the result of the conferences of an open-minded man of long administrative experience with the Missourians who are best informed on finances, hospitals, prisons and good roads. It represents a summing up and boiling down of the best wisdom of the commonwealth.

The inaugural centers everything on a single question: Are the people of Missouri ready to stand squarely behind a policy which is founded on the two assumptions that the only way to run a state is to buy necessary supplies and services and pay for them from taxes intelligently laid and equitably administered, and that the only way to handle the criminal and defective classes is by institutions whose management is vested in the hands of experts, and kept as clear of partisan politics as it is of financial graft?

What say forward-looking men to this platform? Will they heed the Governor's call to them to co-operate with him and hold up his hands?—*St. Louis Republic*.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.  
Webster County Medical Society, Dec. 6, 1916.  
Platte County Medical Society, Dec. 8, 1916.  
Cape Girardeau County Medical Society, Dec. 15, 1916.  
Livingston County Medical Society, Dec. 16, 1916.  
Madison County Medical Society, Dec. 17, 1916.  
Carter-Shannon County Medical Society, Dec. 20, 1916.  
Atchison County Medical Society, Dec. 26, 1916.  
Linn County Medical Society, Dec. 30, 1916.  
Clark County Medical Society, Dec. 30, 1916.  
Benton County Medical Society, Dec. 30, 1916.  
Chariton County Medical Society, Jan. 1, 1917.  
Schuyler County Medical Society, Jan. 5, 1917.  
Crawford County Medical Society, Jan. 9, 1917.  
Adair County Medical Society, Jan. 10, 1917.  
Dent County Medical Society, Jan. 10, 1917.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of the Council, Dec. 13, 1916

The meeting convened at 8:40 p. m., the president, Dr. L. C. Boisliniere in the chair. The minutes of November 8 were read and approved.

A letter from the St. Louis Dental Society requesting permission to again meet in the Bartscher Auditorium was referred to the house committee for recommendation. The house committee immediately recommended that permission to use the Bartscher Auditorium be extended to the dental society on the following conditions:

1. That the dental society pay to the treasurer of the St. Louis Medical Society \$7.50 to cover the cost to the medical society of each such meeting and \$1.50 to be paid to the janitor as his remuneration for his extra work due to each meeting.

2. That the use of tobacco in any form be prohibited in the Bartscher Auditorium—a smoking room being provided adjoining the auditorium.

3. That the dental society agree to recompense the medical society for any damage done the property of the medical society during the meetings of the dental society.

On motion the report of the house committee was adopted.

A letter from Dr. Richard S. Holman pertaining to his delinquency was received and filed.

A letter from the executive committee of the Missouri State Medical Society relative to the publication of our minutes and papers in the journal of the state association was received and filed.

The application of Dr. J. E. Glenn, by transfer, was read for the first time.

A letter from the Missouri State Medical Association requesting information about local members of the State Legislature was referred to Dr. Bliss.

Dr. John C. Falk, chairman, reported for the necrology committee. The report was received with thanks of council for effective work during year.

The membership committee recommended the following applicants for active membership: Martin F. Kouri, 4046 Russell Avenue; Emil E. Hein, City Hospital; Robert H. Lillemann, 3132 Cherokee Street; Edward X. Link, St. Anthony's Hospital; G. M. Pellettieri, 1330 Franklin Avenue; Fred S. Perrings,

Planters Hotel; Linus M. Ryan, 3450a Arsenal Street; Erwin R. Schmidt, Barnes Hospital. On motion all were elected.

The annual report of the censors was received and filed with the special thanks of the council.

The annual report of the committee on health and public instruction was received and filed with thanks.

Dr. Gayler read the annual report of the program committee which was accepted and the committee congratulated on their excellent work during the year.

The annual report of the hospital committee was received and filed with thanks.

Dr. Schlueter read a report for the library committee. It was moved that it be received and the recommendations adopted. Carried.

Dr. Kerwin read the annual report of the ethics committee. It was moved that the report be received and filed with hearty commendation for the work attempted and accomplished during the year.

The report of the Bartscher Fund Committee was read by Dr. Seabold. It was received and filed with special thanks to Dr. Funkhouser.

The report of the house committee regarding ventilating of the Bartscher Auditorium conveyed the information that any system of ventilation installed would be very expensive, costing several hundreds of dollars, none of which systems were practical. It recommended the rejection of all bids and that a no smoking rule prevail during the meetings of the St. Louis Medical Society. On motion the report, with its recommendations, was adopted.

On motion the treasurer was instructed to draw a check equal to the amount of the interest on the Bartscher Fund and deposit in the general fund.

The matter of the use of the Bartscher Auditorium by organizations other than the St. Louis Medical Society was called to the attention of the council. On motion it was ordered that any group of individuals other than the St. Louis Medical Society or sections thereof pay \$3 for any room other than the auditorium and \$7.50 for the auditorium for each meeting therein.

On motion Dr. I. G. W. Steedman was elected to honor membership.

The attention of the council was called to the fact that for the convenience of members of the society a notary public commission had been secured for the clerk of the society.

The attention of the council was called to the fact that the names of several members of our society were printed in the list of membership of an organization antagonistic to the aims and purposes of the St. Louis Medical Society. On motion this matter was referred to the ethics committee.

Dr. Boisliniere expressed his appreciation and gratitude to the council for their splendid cooperation during the year and introduced the president-elect, Dr. Albert H. Hamel.

Councilors present: Drs. Bliss, Burford, Grindon, Hurford, Kane, Koetter, Kuhlmann, North, Richter, Schlueter, Boisliniere and Seabold. Absent: Dr. Thompson.

J. ALBERT SEABOLD, M.D., Secretary.

#### Tentative Program

Saturday, Feb. 3, 1917.—Ocular Tuberculosis and Associated Inflammatory Conditions of Upper Respiratory Tract, Drs. Frederick O. Schwartz and Monte M. Meyers. Eczema, Dr. Richard S. Weiss.

Saturday, Feb. 10, 1917.—Suprapubic Prostatectomy with Special Reference to the Two Stage Operation, Dr. William Robertson.

Saturday, Feb. 17, 1917.—The Preservation of Arm Function After Operations for Carcinoma of the Breast (with lantern illustrations), Dr. William T. Coughlin. Intra-Abdominal Hernia, Dr. Fred W. Bailey.

#### Applicants for Membership

Any member of the society who knows a good or sufficient reason why anyone of the following applicants is not eligible for membership in our society is requested to communicate at once with the membership committee.

Hiliary D. Meyer, 3551 Olive Street. Sponsors: A. R. Kieffer, E. D. Edwards.

Walter James Avery, City Hospital. Sponsors: Wenzel C. Gayler, Charles H. Neilson.

#### WASHINGTON UNIVERSITY MEDICAL SOCIETY

##### Thirty-Third Meeting, June 5, 1916

IMPRESSIONS OF THE WAR AND OF MILITARY SURGERY.—DR. FRED T. MURPHY.

##### Thirty-Fourth Meeting, Oct. 9, 1916

1. EXHIBITION OF CASES.
2. AN IMPROVED METHOD OF PERFORMING GASTRO-ENTEROSTOMY.—By DR. WILLARD BARTLETT.

An original clamp is used, which has exceedingly broad blades, the whole forming a wide, thin, metal table, when fastened together. This contrivance not only covers up the surrounding viscera, but makes the soiling of them by blood or intestinal contents, a remote possibility.

The small field of operation is drawn up between the leaves of this table, and suturing facilitated by the fact that stomach and intestines are thus rigidly fixed in position.

To avoid perpetuating a jejunal ulcer, catgut is used throughout the operation. It is double tanned to resist the process of digestion, as well as that of ordinary tissue absorption.

In order to facilitate the introduction of catgut with the least possible tissue damage, needles have been stamped on to the ends of the individual strands, and thus is afforded a convenient, ever-ready, sterile suture material.

#### DISCUSSION

DR. WILLIAM E. SHAHAN: I would like to ask Dr. Bartlett how these needles are stamped on the sutures.

DR. BARTLETT: I had the maker devise a machine for it, which stamps down on the needles in somewhat the same way as the buttons are stamped on shoes. The needles are made with a little trough having prominent edges. A catgut strand is laid in the trough and the stamp comes down and folds the edges of the trough over the catgut.

DR. GEORGE DOCK: Does it never slip off?

DR. BARTLETT: Very rarely.

3. ELECTROCARDIOGRAPHIC CHANGES INDICATING MYOCARDIAL INSUFFICIENCY.—By DR. G. CANBY ROBINSON.

A series of cases is reported which yielded electrocardiograms showing abnormal ventricular complexes. These abnormalities consist in changes in the initial portion of the complexes, the Q-R-S group, and differ from those yielded by contractions caused by ectopic stimuli and from those changes which occur with bundle-branch block.

These abnormalities are apparently dependent on derangement of the intraventricular conduction which prevents the passage of the excitation wave, either along the usual paths or at the usual rate throughout the ventricles.



The normal spread of the impulse is hindered because the impulse reached the ventricles before the conducting system had recovered from the preceding contraction, and the records indicate in some cases that this derangement disappears with prolonged ventricular rest.

The observations are taken as evidence for the belief that in cases in which the ventricular complexes are constantly abnormal there are functional changes in the heart which prevent the normal recovery of intraventricular conduction during diastole. It is shown that changes in form of the ventricular portions of the electrocardiogram may occur synchronously with functional changes in the heart, and evidence is offered for the belief that certain abnormalities in the form of the electrocardiogram indicate functional derangement of the ventricles.

#### 4. A STUDY OF THE SPINAL FLUID IN POLIOMYELITIS.—By DR. PHILIP C. JEANS.

Examination of the spinal fluid is necessary for diagnosis in preparalytic and abortive cases of poliomyelitis since the diagnosis cannot be made with any reliability from the clinical features alone. There is no laboratory measure that is pathognomonic of this disease and it would seem advisable to extend our routine methods of examination as much as would prove helpful. The Lange colloidal gold reaction with spinal fluids from one hundred cases of poliomyelitis occurring in the New York epidemic is studied to determine its value as a diagnostic measure. It is found that, though often helpful, this reaction is not of any great assistance in differentiating poliomyelitis from other meningeal affections having a clear though pathological spinal fluid. The fluids from tuberculous meningitis and poliomyelitis cause as a rule quite different types of reaction but there are sufficient instances of similar reaction to make the test in such a case of but little value.

In about 10 per cent. of the fluids studied, the Lange reaction was practically the only evidence that the fluid was pathological. This evidence of a pathological change is not necessary for diagnosis in a paralytic case, but in a preparalytic or abortive case it is of considerable value in connection with the clinical manifestations. In 10 per cent. of the nonparalytic and abortive cases studied, the colloidal gold reaction was the only evidence of a pathological change in the spinal fluid and is important evidence that these patients had poliomyelitis.

#### DISCUSSION

DR. G. CANBY ROBINSON: I was interested to hear of the rarity of fluids that showed polymorphonuclear leukocytes. I think that you said only one had been encountered. In the cases that we studied in New York in 1911-1912, we encountered more cases of purulent fluids in poliomyelitis, and apparently that was the early change. In experimental poliomyelitis, in monkeys, when the fluid could be examined soon after the inoculation, polymorphonuclear leukocytes were quite common and frequent, large proportions of the leukocytes being polymorphonuclear. Then, as the disease progressed, the lymphocytes or the mononuclear cells predominated. I remember one case where we got the spinal fluid in preparalytic stage, which was very cloudy, and had seven or eight hundred cells per cubic millimeter, mostly polymorphonuclears.

DR. JEANS, concluding: During my month's stay in New York, about three hundred fluids from cases of poliomyelitis were examined in the laboratory to which I was attached. None of these was of the purulent type. There were two clear fluids in which

the polymorphonuclears were increased, one to 50 per cent. and one to 60 per cent. In every other case the fluid was clear and the mononuclears were 80 per cent. or more of the total cells.

As to the early changes being different from the late changes, I know that in the work done at the Rockefeller Institute this was found to be so; but the observations in the present New York epidemic, so far as I am aware, could not have upheld that view. We saw cases in the first twenty-four hours many times, and the cells were mononuclears.

#### 5. THE PRESENT EPIDEMIC OF POLIOMYELITIS IN NEW YORK.—By DR. BORDEN S. VEEDER.

The present New York epidemic of infantile paralysis is noteworthy because of its tremendous size. Starting in New York City in June it extended radially along the lines of traffic to all the neighboring states within a radius of 300 to 400 miles. In all nearly 20,000 cases developed, and the largest epidemic previously known had less than 2,500 cases. The age incidence, sex distribution, seasonal incidence, etc., corresponded closely to smaller epidemics in the past. The mortality rate was extremely high, varying from 20 to 30 per cent. in different communities, and this despite the recognition of abortive cases.

Stringent rules as regards isolation and hospitalization of the cases were enforced and although the city and state boards of health and the Public Health Service were extremely active, it is questionable whether the methods used in any way limited the spread of the disease. The hospitalization of so many cases furnished a most unusual opportunity for clinical study of the unusual types of clinical poliomyelitis. It is felt that the present epidemic either marks the "crest of the wave" as poliomyelitis has been on the increase in the last decade, or else the beginning of a nation wide scourge that will localize itself in the West in the next few years. No definite reports of scientific studies are as yet available.

#### DISCUSSION

DR. G. CANBY ROBINSON: I have been very much interested indeed to hear of this epidemic. It is a most mysterious disease and the way the sporadic cases occur seems to be one of the most mysterious factors in it. This summer I was in the mountains in southern Pennsylvania where there was quite a large summer colony and also a colony of mountain people, and every one was very much alarmed that poliomyelitis would appear. It did appear, and the case was the 1-year-old child of a Polish shoemaker who was practically isolated from all the other people up there. He was a man who had gone to that part of the country to live recently, and none of the mountain people who had been there for any time associated with him. His family were more or less ostracized, and this child was about as unlikely an individual as there was in the community to take it. There were no other cases, in spite of there being other children in the family.

DR. F. T. MURPHY: Dr. Veeder spoke of possible contagion by direct contact and also mentioned the possibility of infection by the bite of insects. I think it would be very interesting if he would give us any of the gossip as to the possible insect involved. Massachusetts recently has been much exercised over Dr. Mark Richardson's article on the possible transmission by the rat flea. I wonder if at the meeting Dr. Veeder mentioned there was any discussion or speculation as to the necessity of an intermediate host for the development of the organism, or any speculation as to the insect that might be the carrier.

DR. VEEDER, closing: There was considerable discussion at the meeting on the question of transmission. Dr. Flexner, who was presiding, is very strongly in sympathy with the view that the disease is carried by direct contact. The men working for the government I think inclined more to the view that we may find it is carried by insect transmission. The point was brought up and discussed more informally than formally. Because of the widespread localization of the disease, it being found all over the United States, in South America, in the Indies, all over Europe, as far north as Alaska and in the tropics occasionally—if it is by insect transmission it is by some species which has an extremely widespread distribution. The fly seemed to be the insect suspected more than any other; some body parasites are also suspected.

Only one or two things were brought out in New York in regard to insect study. One was that at Barren Island, where practically all the refuse finds its way, there are about 1,500 people living and among these two or three hundred children, and here flies, they say, are extremely thick, and yet not a single case developed in this the worst sanitary district in the city. That was the only bit of direct information that came out at the meeting; the rest was just general speculation.

We do know that the disease has been transmitted from one infected monkey to another monkey by the bites of insects, as I mentioned, but these experiments were performed under absolutely artificial conditions, such conditions as one could hardly imagine existing in life. The point was brought up as to whether or not it might be a disease which was transmitted by lower animals—that is, lower animals acting as carriers. It was shown that so far as we know no animal has ever died from poliomyelitis. They were collecting paralyzed animals and a large number were brought in to the laboratories in New York, but the lesions so far as I know never resembled poliomyelitis lesions and in a good many cases some other definite cause could be found for the paralysis.

### Thirty-Fifth Meeting, Nov. 13, 1916

#### 1. EXHIBITION OF CASES.

##### (A). A CASE OF MULTIPLE CARTILAGINOUS EXOSTOSES (HEREDITARY DEFORMING CHONDRODYSPLASIA).—By DR. PHILIP MOEN STIMSON.

The patient was an undersized, rather thin and anemic-looking boy of 9½ years, whose mother had brought him to the hospital for observation, but specifically because of bony prominences particularly on his extremities, and because of so-called "nervousness." The boy had been born at the time of his mother's menopause, and following a severe nephritis during the last two months of her pregnancy. The baby had weighed less than three pounds at birth, and seemed moribund, but had gradually gained in weight so that at the end of a year he had appeared to be a fairly normal child. There was a history of epileptiform convulsions which were very frequent in infancy particularly, but which seemed to be irrelevant to the bone condition. At 4, certain irregular prominences in his long bones had first been noticed, and these had grown steadily with the bones without causing any symptoms whatever. There was no history of trauma, except a broken finger following an accident. The boy's mother showed similar bony abnormalities in her wrists and upper arms, and an older married sister also showed similarly abnormal wrists, but the boy's three other brothers and sisters

were apparently unaffected as were also the children of the married sister.

Examination of the patient revealed hard, apparently bony, prominences, of varying shapes and sizes, situated on the long bones of the extremities in the vicinity of the epiphyseal lines, also a few spur-like knobs along the crest of each ilium and on the body of each scapula, but the skull, vertebrae, ribs, and the bones of the hands and feet seemed to be uninvolved. Roentgenograms showed numerous cartilaginous exostoses in the patient's limbs, and a similar condition in the mother's wrists and upper arms.

Dr. Schwab had noted no particular anomalies in the musculature, except that there was a remarkable degree of hypotonia at the wrists and ankles while motion at the elbows and knees seemed quite spastic. A Binet-Simon test showed a mental age of approximately 6 years, a condition thought to be a permanent subnormality rather than due to the defective vision. Wassermann tests on the mother's blood, and on the patient's blood, were both negative.

#### DISCUSSION

DR. A. O. FISHER: This was a case almost identical with one which we studied and reported about three years ago, a man 30 years old and quite normally developed except for his skeletal system, and without mental disturbance of any kind. There was no history of such deformity in his family previously.

The case was remarkable in that the deformities were so prominent, much more so than we find them in this case. All of the long bones were involved, some of them so badly deformed that the patient was incapacitated from doing any manual labor. The only bones in the entire skeleton free from these deformities were the bones of the skull, and this was explained in the fact that they are laid down in membrane rather than in cartilage.

We felt that the condition here could be explained by a developmental defect at the epiphyses and the exostoses were due to misplaced fragments of cartilage. The exostoses were definitely cystic in some instances, which was demonstrated by removal of one of them for examination; others from Roentgen-ray pictures seemed to be made up of cancellous bone.

DR. F. T. MURPHY: In reference to these pictures it occurred to me that the matter of age might have some effect on a cyst formation. In the case to which Dr. Fisher refers, the bones in many places degenerated and formed large cystic cavities, showing very close relationship with these embryonic remnants and the formation, possibly, of a good many of these bone cysts. I wonder if Dr. Opie would express an opinion as to whether this might later undergo cystic degeneration or not.

DR. E. L. OPIE: I assume that they would remain in most instances much as the bones have remained in the adult skeleton exhibited. There is a very marked tendency, as seen in the Roentgen ray, to rarefaction at the tips of the bony processes and it is possible that this change might proceed in some instances to cyst formation; but from the Roentgen-ray plates I have seen of the condition in adult life, I am led to believe that this does not usually occur. The case of Drs. Fischer and Carman appears to be somewhat unusual in this respect.

DR. BORDEN S. VEEDER: I think that in these cases the "bone cysts" are more apparent than real. The center of the exostoses becomes a part of, or closely connected with the medullary cavity, while the periosteum becomes calcified. Hence the shadow of the irregular outline of the exostoses will give the suggestion of a cyst depending on the plane and position in which the radiograph is taken.



## (B). A CASE OF FIBRONEUROMA, CONCURRENT SARCOMA AND PIGMENTED MOLES.

—By DR. V. P. BLAIR.

The patient is a young woman aged 20 years, who first came under observation in 1912. At that time she had a lump below the eye and near the right side of the nose which had been growing for three years; it was a soft, diffuse subcutaneous tumor and at times small blisters appeared on its surface. In March, 1911, a part of the tumor was removed at the City Hospital; the microscopic diagnosis was fibro-endothelioma. In 1912 the entire tumor on the cheek was excised and the defect repaired with a flap from the neck. Patient also had a scar over the sternum due to excision of a tumor, two years previously, which had recurred. In March, 1913, this was removed and it was found that there was a mass attached to the sternum and projecting into the mediastinum. Microscopic sections were submitted to Dr. Opie who stated that the tumor resembled a spindle celled sarcoma. A small, soft growth on scalp, over right mastoid, was also excised; this proved to be a fibro-neuroma.

At present the patient has numerous, painless, small soft tumors on back and chest which vary in size from 0.5 to 3 cm. in diameter; they do not seem to follow the distribution of the large nerves. On July 25, 1916, one of these small tumors was excised from the right side; this also resembled a fibro-neuroma.

Recently a large number of pigmented moles have appeared over the upper part of the patient's chest and back. She has been losing in weight although general physical examination is negative.

The case is of interest in that we have a patient with multiple tumors associated with a probable sarcoma.

## DISCUSSION

DR. R. F. FISHER: In looking up the literature one finds that sarcomatous degenerations in neuro-fibroma are not uncommon. Adrian (Beitr. f. Clin. Chir., 1901) reports forty cases of malignant change in neurofibroma. He also quotes Garré who states that 12 per cent. of all cases are malignant but he considers this too high. It is interesting to note that muscles usually are free from the tumors, but that they have been described in almost every other tissue of the body.

## 2. HEALED PULMONARY TUBERCULOSIS.—

By DR. EUGENE L. OPIE.

I have attempted, in association with other studies concerning tuberculosis, to determine the frequency with which recognizable tuberculous lesions may be found in St. Louis. Here conditions of living are presumably more favorable than in the cities of the old world where investigations of the frequency of tuberculous infection have heretofore been made. Lesions have been regarded as tuberculous only when there is caseation or calcification with encapsulation by fibrous tissue. The use of the Roentgen ray has proven an efficient means of finding calcified foci in the lung and in many instances has led to the discovery of nodules which would otherwise have been overlooked. The number of lungs examined is small and if it had not been possible to demonstrate undoubted tuberculous lesions in everybody examined the statistics obtained would be of small value. Forty lungs from adults have been examined and in every instance preexisting tuberculous infection has been demonstrated. These lesions have the characters of the tuberculosis of early childhood and do not resemble phthisis of adults which is almost in-

variably situated in the apex of the lung and exhibits little tendency to involve the lymphatic nodes at the hilus of the lung. The healed lesions of adult life may occur in any part of the lung and are not more frequently situated in the apex than elsewhere. The lymphatic nodes at the hilus of the lobe in which the pulmonary lesion is situated contain tuberculous lesions and these tuberculous nodules not infrequently have an appearance which suggests that they are younger than the nodules within the substance of the lung. At the bifurcation of the trachea or elsewhere nearby are often found much enlarged lymphatic nodes containing large calcified masses doubtless representing healed caseous lymphatic tuberculosis of infancy or early childhood. Evidence of dissemination such as frequently occurs in childhood has been repeatedly observed. In twelve of forty necropsies, encapsulated, usually calcified spherical nodules having the same appearance as nodules found in the pulmonary lymph nodes have been scattered in the spleen. When scant in number they are readily located by the aid of a Roentgen-ray plate. Similar nodules are occasionally found in the liver. Firmly calcified, obviously healed lesions scattered in various parts of the lung have been repeatedly found in association with apical tuberculosis. In two instances the apical lesion has been active and caseous whereas in four instances it has consisted of dense fibrous tissue containing an occasional caseous (2) or calcified (2) focus.

## DISCUSSION

DR. J. E. COOK: This work of Dr. Opie shows most conclusively that the Roentgen-ray demonstration of calcified nodules in the lung is entirely worthless as evidence of any active tuberculosis. Indeed, it would seem that we might expect to see these calcified nodules in every Roentgen-ray plate which has been taken under favorable conditions. In a recent monograph Gohn reports his findings in a series of necropsies on infants and children. Several of his conclusions are in striking accord with the evidence presented this evening. For instance, these early tuberculous lesions occurred only very rarely in the apices, being found in almost every other situation. Again, whenever a lesion of this kind was found in the lung there was a demonstrable tuberculosis in the neighboring lymphatic glands. There was only one exception to this in 184 necropsies.

DR. J. J. SINGER: The question of calcified nodules is probably one that interests the clinician, the roentgenologist and also the phthisiologist. A great many men claim that any nodule in the lung represents a "healed" tuberculosis, but it has been proven that a great many of these so-called "healed tuberculous areas," if properly treated and injected into guinea-pigs, will produce the disease; therefore I do not believe that anyone can tell whether they are healed tuberculosis or not.

DR. G. CANBY ROBINSON: There is probably a relation between the dose of the tubercle bacillus received in childhood and the development of later tuberculosis. We see so frequently in tuberculous patients the history of tuberculous parents and, of course, this is the reason why tuberculosis was formerly considered to be of hereditary origin—at least, heredity was supposed to play an important rôle. But as a matter of fact, it is now considered that the individual who later develops tuberculosis is the individual who as a child received an especially large dose, as we might call it, of the tubercle bacillus. Therefore, it seems likely that those children who receive a smaller dose, having had a less intensive exposure to tuberculosis, are more apt to have the tuberculous infection remain latent through life than

the children that receive a distinctly heavier infection in childhood.

DR. W. C. G. KIRCHNER: I should like to confirm the statement that Dr. Opie made in regard to the universality of tuberculosis. Some fifteen years ago, in order to determine the prevalence of tuberculosis, we made special observations on all necropsies that were held at the City Hospital—at that time post-mortems were a daily occurrence—and in nearly every case we could find, on careful examination, evidence of active or healed tuberculosis. I think these observations were made on a series of over several hundred cases.

DR. BORDEN S. VEEDER: There is one thing that occurred to me in connection with this study of Dr. Opie's. One of the great controversies in recent years in the field of tuberculosis, since the recognition of the frequency of tuberculous infection in childhood, has been whether or not tuberculosis in the adult is the lighting up of an old process in childhood, or whether it is a superinfection. Led, perhaps, by Dr. Baldwin, who I think has championed the theory that tuberculosis in the adult is the lighting up of an old process, this view has rather come to prevail among the men who have been particularly interested in tuberculosis. On the other hand, a number of men believe that it is a new infection. It would seem to me that this work of Dr. Opie might throw some light on this point. If the adult lesions were simply the lighting up of an old process acquired in childhood—which is a very attractive theory in many respects—it would seem that we would have some spreading of the original lesion, rather than a lesion in apparently a new anatomical position. I would like to ask Dr. Opie if where both the adult type of lesion with the chronic fibrosis, and the healed tubercle of the infantile type are present there is any relationship between the two lesions, or do they seem to be distinct and discrete?

DR. F. T. MURPHY: Dr. Opie spoke of the difficulty in finding some of these cases. I wish to ask the question, if by the Roentgen ray some of these lesions were demonstrated which otherwise would probably have been overlooked?

DR. OPIE, closing: In answer to Dr. Murphy's question I may say that those who have studied the subject by the ordinary methods have obtained divergent results. Nägeli obviously studied the lungs very carefully and evidently did not stop searching until, in most instances he found a lesion, for in 97 per cent. he was successful. Burkhardt found them in 91 per cent. of bodies; Harbitz in 65 per cent., and figures vary between these limits. Repeatedly I have had a Roentgen-ray plate before me showing a minute lesion, perhaps 2 mm. in diameter, and I have searched the lung carefully after it has been cut into thin sections. Only after prolonged search has a lesion been found hidden perhaps between the two branches of a small bronchus. It is very surprising how difficult it is to localize from the two dimensions of a plate the exact position of a lesion, and I feel sure that in a considerable number of instances I would not have found the lesion had I not had the roentgenogram before me.

I think we may definitely call these calcified nodules primary lesions. As to the relation of this primary lesion to a subsequent infection, such as occurred in a number of instances in the apices, it is difficult to form a positive opinion. As Dr. Veeder suggests, in most instances there is no demonstrable relation. A calcified nodule may be found on one side with the regional lymphatic node involved and a second tuberculous lesion may be found in the other apex.

### 3. THE VAPORIZATION OF WATER FROM SKIN AND LUNGS IN HEALTH AND DISEASE.—By DR. EUGENE F. DuBOIS, New York.

Over three hundred observations on normal controls and patients have been made in the respiration calorimeter of the Russell Sage Institute of Pathology. This apparatus is a copper box of about one thousand liters capacity in which the subject lies at complete rest at a temperature of about 23 C. and a relative humidity between 35 and 55 per cent. Normal men under these conditions lose on an average 28 gm. of water an hour through skin and respiratory passages, dissipating in this manner 24 per cent. of the total heat produced in their bodies. In all of the controls studied the percentage of heat lost in vaporization is close to this figure which is used as a standard. Most of the patients with various diseases come surprisingly close to this standard. We can say that the percentage of calories lost in vaporization is normal in pernicious anemia, nephritis, diabetes, mild grades of cardiac decompensation and mild cases of hyperthyroidism. There is a moderate increase in water elimination in severe hyperthyroidism, severe cardiac dyspnea and in typhoid fever when the temperature is falling. There is a moderate decrease in water elimination in cretinism and in typhoid fever when the temperature is rising.

In estimating the water balance of a patient we must take into consideration the water of the feces, the water vaporized from skin and lungs (600 to 800 c.c. a day) and the water contained in the so-called solid foods. Some meals of "solid" food may contain 500 to 600 gm. of water.

#### DISCUSSION

DR. F. H. EWERHARDT: I wish to ask Dr. DuBois whether I understood him to say that drinking water does not increase vaporization.

DR. DuBOIS: Yes.

DR. G. CANBY ROBINSON: I do not want to let this opportunity go by without expressing my admiration for this work and the extreme interest that it must have for us all. We, of course, have realized that the skin and lungs were constantly active, but I am sure most of us had very little conception of what they were really accomplishing and the fundamental rôle, as far as life and health go, that the skin and lungs continuously play in keeping up the water balance of the body. I think that we all realize what a remarkably important and new field this paper which we have heard tonight opens.

DR. ELLIS FISCHER: I should like to ask Dr. DuBois if the percentages in hyperthyroidism and cretinism can possibly be, or may have been used clinically in differential diagnosis, perhaps in cases where the diagnosis of hyperthyroidism or of cretinism might come into question; whether this work would be an aid in differential diagnosis along those lines.

DR. F. T. MURPHY: What Drs. Robinson and Shaffer have said leaves very little for me as a final word of appreciation. I do feel, however, that to have so highly technical a subject presented in such a way, and with such direct clinical bearing for all of us who are interested in the clinical side of the work as well as the technical, is extremely gratifying. I am sure that I voice the sentiment of the society when I say that we are in very great debt to Dr. DuBois for this paper.

DR. DuBOIS, closing: In regard to the question of differential diagnosis, of course, in the extreme grades of hyperthyroidism the increased warmth and increased moisture are pretty easily determined, and the opposite, of course, is true with the distinct cases



of cretinism. But when you come to the borderline cases, the cases that we are not sure are not perhaps going from a hyperthyroidism into a hypothyroidism, or cases that have been operated on, or cases that have been treated for a long time, or that have some complications, there it is very hard to determine what the heat production is going to be, whether you have an over-activity or an under-activity of the gland. It is in just those cases that we use the total heat production, as measured by the calorimeter, in the differential diagnosis. It will, I think, make a positive diagnosis as to whether you are having too much or too little secretion of the thyroid gland. Now the method of study of the respiration metabolism is being used in quite a few clinics as a means of diagnosis of diseases of the thyroid gland. If you could determine accurately the water elimination, you could perhaps use that also, but you would have to fix your standard conditions and the technic would be nearly as difficult as determining the oxygen consumption.

#### JOINT MEETING SCHUYLER COUNTY AND FIFTH DISTRICT MEDICAL SOCIETIES

The Schuyler County and Fifth District Medical Societies met in Lancaster, Dec. 21, 1916, with the following members present: Drs. E. E. Parrish, Memphis; W. S. Petty, Rutledge; W. F. Justice, J. H. Keller, B. B. Potter and W. A. Potter, Lancaster; H. E. Gerwig, A. J. Drake and J. B. Bridges, Downing.

The meeting was called to order at 1 o'clock p. m., by the president, Dr. H. E. Gerwig. The minutes of the last meeting were read and approved.

A communication from the Council on Health and Public Instruction concerning optometry was read. After a liberal discussion the pending bill was on motion condemned and the following committee of three, Drs. J. H. Keller, W. A. Potter and F. B. Farthington, was appointed to wait on our representative and senator and urge the defeat of the measure.

A communication concerning the Workmen's Compensation Law was read and discussed and on motion it was tabled.

Dr. E. L. Cox of Glenwood presented his application for membership in the Schuyler County Medical Society. It was referred to the committee of censors who reported favorably and Dr. Cox was duly elected by ballot to membership.

The secretary-treasurer made a report of the Schuyler County Medical Society for the year ending Dec. 21, 1916, showing a balance in the treasury of \$9.15.

Next was the election of 1917 officers which resulted as follows: President, Dr. B. B. Potter; vice president, Dr. J. H. Keller; secretary-treasurer, Dr. J. B. Bridges; delegate, Dr. W. A. Potter; alternate, Dr. H. E. Gerwig.

On motion it was determined to hold the meetings of the society at the different towns in the county the coming year. This concluded the business of the County Society and the District Society opened with Dr. B. B. Potter, president, in the chair, and Dr. E. E. Parrish, secretary.

The minutes of the last meeting were read and approved; the secretary made his annual report which was adopted, and the following officers were elected for the ensuing year: President, Dr. W. S. Petty; first vice president, Dr. W. F. Justice; second vice president, Dr. J. B. Bridges; secretary-treasurer, Dr. E. E. Parrish.

The following joint program was rendered:

Dr. E. E. Parrish read a paper on Lymphoid Leukemia.

Dr. W. A. Potter read a paper on Hemophilia.

Dr. J. H. Keller read a paper on Pneumonia.

All these were good and able papers and were freely discussed by the members.

The meeting adjourned to the Hotel St. George where a very appetizing and hunger-relieving banquet had been prepared for the doctors and their wives. The committee in charge was composed of Drs. B. B. Potter, J. H. Keller and W. F. Justice. Mayor T. L. Buford was toastmaster and the responses were numerous. There was nothing to mar the happiness of the occasion except the absence of three of the doctors' wives, but taking it all in all it was a very enjoyable occasion and we hope to be able to report a better one soon.

J. B. BRIDGES, M.D., Secretary.

#### ADAIR COUNTY MEDICAL SOCIETY

At the November meeting of the Adair County Medical Society the following officers were elected for 1917: President, B. B. Parrish; vice president, M. E. Derfler, secretary-treasurer, J. W. Martin; delegate to the state association, E. C. Callison.

In compliance with the request of Maj. Robert U. Patterson, secretary of the National Committee on Red Cross Medical Service, the following were appointed a committee on Red Cross work: E. C. Callison, A. W. Parrish and J. S. Gashwiler, the president, B. B. Parrish and secretary, J. W. Martin, being ex-officio members of the committee.

At the December meeting an interesting paper was read by Dr. Callison, subject: "The Most Common Forms of Insanity We Meet in General Practice." The paper was fully discussed.

A communication from Mrs. Anna F. Harris, secretary of Committee for the Prevention of Blindness, was read and after discussion all members pledged their cooperation.

The secretary announced that Dr. W. F. Hardy of St. Louis, a representative of the Missouri Commission for the Blind, delivered an illustrated lecture here to about three hundred school teachers on November 3, appearing on the program of the Rural Life Conference, which was much appreciated by the profession and the laity.

An informal discussion of the work of the society for 1917 was participated in by all members present.

The secretary insisted on all members paying their dues for 1917 before the close of the year, and all but one responded.

#### January Meeting

At the January meeting of the Adair County Medical Society, a motion was passed "that all medical men who are asked to speak in public under the auspices of this society be indorsed by the Missouri State Medical Association and by this society before they are invited to speak."

The bills now before the legislature known as the Optometry Bill and the Workmen's Compensation Act were taken up for consideration. After a full discussion the first bill was disapproved and the latter indorsed, and the secretary was instructed to notify our representative and senator of our action.

Dr. A. C. Crank of Canton, councilor for this district being present, the remainder of the time was given over to the consideration of matters which he desired to present. Dr. Crank gave an outline of a proposed bill to be presented to the present legislature pertaining to medical inspection of rural school-children, with reference to defects of eye, ear, nose, throat, teeth and skin. After a full discussion, the points in the proposed bill were, by motion, approved by the society.

J. W. MARTIN, M.D., Secretary.

**BATES COUNTY MEDICAL SOCIETY**

The Bates County Medical Society met in regular session, December 28, at Butler, in the office of Dr. T. C. Boulware. The meeting was called to order at 2 p. m. The minutes of the last meeting were read and approved. Those present were Drs. T. C. Boulware, E. N. Chastain, T. F. Lockwood, and J. S. Newlon.

The Workmen's Compensation Bill was taken up in due form and discussed by all present. It was moved by Dr. C. N. Chastain and seconded by Dr. T. F. Lockwood that the bill be unanimously approved and indorsed by the Bates County Medical Society. Carried.

The Optometry Bill was taken up in due form and discussed by all present. The bill was seriously criticized by every member and the secretary was instructed to write to our senator and representative as to the attitude of the society and instruct them to act accordingly at the next general assembly.

After the subject of pneumonia was discussed in an informal way, election of officers for 1917 was in order.

Dr. J. H. Fletcher of Spruce was nominated for president and elected by acclamation. Dr. J. S. Newlon was nominated for secretary and reelected by acclamation. Dr. T. C. Boulware, vice president, appointed on the board of censors Drs. E. E. Robinson, T. F. Lockwood and E. N. Chastain.

Meeting adjourned at 4 p. m. Next meeting Jan. 25, 1917. J. S. NEWLON, M.D., Secretary.

**BENTON COUNTY MEDICAL SOCIETY**

Benton County Medical Society met in Warsaw, in Drs. Dillon and Logan's office, Thursday, Dec. 8, 1916. Dr. E. L. Rhodes of Lincoln was elected president pro tem. The meeting was called to order at 10 a. m., and the regular routine work was transacted.

Dr. Savage asked the society to endorse Dr. W. P. Bradley of Nevada (now superintendent of the State Hospital), for reappointment under the new administration. A nomination seconded and carried unanimously, was followed by resolutions being drawn up by the legislative committee, asking Governor-Elect Gardner to reappoint Dr. Bradley superintendent of the State Hospital at Nevada, and these resolutions were forwarded to Governor-Elect Gardner.

Dr. Logan made a suggestion that we solicit the efforts of every member of this society and that of our state secretary to encourage and urge a full attendance at every meeting, and each one do his individual duty in making every meeting interesting and profitable and thus create greater influence and closer fellowship.

The election of officers for 1917 resulted as follows: President, E. L. Rhodes, Lincoln; vice president, Harry Bay, Cole Camp; secretary-treasurer, J. R. Smith, Warsaw; delegate, H. G. Savage, Warsaw; alternate, R. L. Pomeroy, Warsaw; censor for three years, J. A. Logan, Warsaw; censor for two years, W. G. Jones, Warsaw, to take the place of Dr. Dillon who is leaving to locate in Los Angeles. Appointment of the committee on legislation was J. A. Logan, chairman, Warsaw; H. G. Savage, Warsaw; O. L. Cuddy, Lincoln.

The next meeting was called by President-Elect Rhodes for January 18, to be held in Warsaw, with papers to be read by Drs. N. A. Schwald, Cole Camp, and J. R. Smith, Warsaw.

J. R. SMITH, M.D., Secretary.

**BUCHANAN COUNTY MEDICAL SOCIETY**

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, Jan. 3, 1917, the president, Dr. Geiger, in the chair and twelve members present. The minutes of the previous meeting were read and approved.

The banquet committee made their report and presented the bills which were allowed. Other bills were presented and a warrant ordered drawn on the treasurer to pay them. All the business of the past year having been completed the new president, Dr. F. Spencer, was installed.

The secretary's annual report was read and on motion was ordered spread on the minutes of the meeting.

The application of Dr. C. W. Bertram received its first reading and was referred to the board of censors for investigation and action.

On motion of Dr. Charles Geiger, seconded by Dr. Reynolds, the president was instructed to appoint a special committee on economics.

There being no further business to come before the society, the meeting adjourned.

**Meeting of January 17**

The regular meeting of the Buchanan County Medical Society was held in their rooms Wednesday evening, January 17, the president, Dr. F. H. Spencer, in the chair. Twenty-four members were present. The minutes of the previous meeting were read and approved.

The application of Dr. C. W. Bertram for membership having been approved by the board of censors and received its second reading, was balloted on and the doctor was duly elected to membership. The following applications by transfer were read and duly elected: Dr. E. H. Bullock from Knox County, Dr. E. F. Higdon, Ray County; Dr. M. L. Underwood, Grundy County, and Dr. H. DeLameter, Jackson County.

The following applications for membership received their first reading and were referred to the board of censors for their investigation and approval: Drs. H. O. Whitten, Buford M. Colby, Forest Thomas, J. D. Vaughn, Highland K. Wallace and E. B. Kessler.

The chair appointed the following special committee on Economics: Drs. P. I. Leonard, G. A. Lau and E. F. Cook.

The following amendment to Section 1, Chapter 4 of the By-Laws was introduced by Dr. P. I. Leonard and received its first reading:

There shall be added to the Standing Committees a Committee on Economics, consisting of three members.

The duties of this committee were outlined as follows:

Committee on Economics.—The Committee on Economics shall consist of three members to be appointed by the president. It shall be its duty to investigate the financial relation of the physician in regard to his charges in private practice, medicine, surgery and the specialties, life insurance examinations, contract and lodge practice, dispensary abuse, and the Workmen's Compensation Law as it affects physicians.

The following two provisions have been universally adopted throughout all the states:

1. The right of the employer to select medical attendants.

2. Having a waiting period of from ten to fifteen days during which time the employer furnishes medical attendance and becomes responsible for a certain amount as provided by the act.



It is to the interest of the medical profession to help to mold this act as much as possible in their interest, if not, we are at the mercy of such economic arrangement as may be made by those not so interested. Grievances of a financial nature are solicited by this committee. They are then to be investigated and such report is returned to the society for action. Publicity is the ultimate cure for many evils and those practices of physicians which pauperize should be brought to the attention of those who indulge in them as hurtful to themselves primarily.

The secretary was instructed to send a letter to the different members of the State Legislature protesting against the passage of the Optometry and Chiropractors Bills and was further instructed to send a night letter to Dr. C. R. Woodson, at Jefferson City, advising him to use his best influence and efforts toward safeguarding the interests of this society.

The treasurer's report was read and referred to the Executive Committee.

Tuesday, January 23, was designated for a special meeting to discuss and talk about the Optometry Bill, Chiropractic Bill and Workmen's Compensation Act.

The scientific session consisted of a paper by Dr. O. A. Schmid, subject, "A Case of Mediastinal Tumor with Presentation of Patient." Discussed by Drs. Carle, McGlothlan and Lynch.

This was followed by an open discussion on the medical and surgical aspect of gastroduodenal ulcer. Discussed by Drs. J. M. Bell, Caryl Patter, G. A. Lau, A. B. McGlothlan and F. H. Spencer.

There being no further business to come before the society, the meeting adjourned.

W. F. GOETZE, M.D., Secretary.

#### CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met in Liberty, Saturday evening, December 23, with sixteen members present. Interest was never better. Just a few of the boys are two years behind the band wagon, however, in spite of the fact that we are doing all we can to please them.

The secretary's report for 1916 showed an increase in attendance of five members per meeting over 1915.

A resolution indorsing the placing of the eleemosynary institutions of the state under a central board of control was read and indorsed unanimously.

The election of officers resulted as follows: H. J. Clark of Excelsior Springs, president; R. J. Woods of Smithville, vice president; J. J. Gaines of Excelsior Springs, reelected secretary and treasurer; J. H. Rothwell of Liberty, delegate to state association; E. L. Parker of Excelsior Springs, alternate; R. E. Sevier of Liberty, reelected on board of censors for three years.

Dr. W. S. Wallace read a posthumous paper, entitled "A Bit of Nonsense." The doctor led us through the fields of allegory, romance, anatomy, love and turnips. A big round of applause followed and a request that the paper be submitted to THE JOURNAL for publication.

Dr. E. H. Miller, "the Dean of the local profession," opened a general discussion, speaking of the delusiveness of abdominal symptoms. He was followed by Drs. Rothwell, Lowrey, Sevier, Matthews, Craven and others. The surgery of the gallbladder was an interesting topic.

It is hard to see how a member of the Clay County fraternity can afford to miss these instructive gatherings.

J. J. GAINES, M.D., Secretary.

#### CLINTON COUNTY MEDICAL SOCIETY

The Clinton County Medical Society met in Cameron, December 29, and elected the following officers for 1917: President, Dr. John Kay, Perrin; secretary-treasurer, Dr. P. H. Stockfleth, Cameron; censor, Dr. R. W. Rea, Plattsburg.

M. L. PETERS, M.D., Secretary.

#### GRUNDY COUNTY MEDICAL SOCIETY

The Grundy County Medical Society met January 3 at Trenton where a banquet was served in the Trenton Hotel and after the banquet Dr. J. F. Fair, president, acted as toastmaster and introduced the speakers.

Dr. E. J. Goodwin of St. Louis, secretary of the Missouri State Medical Society and Editor of the Missouri State Medical Journal, made a very interesting and instructive address. Dr. Goodwin told us about the early organization of the state and county societies and of the changes that had occurred. How the membership had increased and what was now being accomplished in the way of health protection and sanitation; he also mentioned the State Journal and spoke of the clean class of advertisements it carried. We were indeed glad to have Dr. Goodwin with us and we are sure it will do our society much future good as he gave us some good advice on conducting our society affairs.

Dr. J. B. Wright, councilor of the Fourth District, made a very interesting talk on conditions in his district and informed us that all the counties in his district had well organized and enthusiastic societies.

Dr. James R. McVay, one of our "home boys," now at the Mayo Clinic, Rochester, Minn., read a paper on "Laboratory Diagnosis;" the paper was interesting and instructive and much enjoyed by all present.

There followed a general discussion, most all the doctors present taking part. Dr. W. D. Fulkerson, treasurer and poet-laureate of our society, responded in the following rhythmical style:

Mr. President:

I'm sure I speak for all of us in saying we are proud  
To have our lady doctors here, and mixin' with the  
crowd.

They're among the best physicians in this corner of  
the woods.

And, in eating and in talking, they can sure "put up  
the goods."

We enjoy these little meetin's, they're a help in ev'ry  
way.

Here we doctors get together, after workin' hard  
all day,

And we throw aside our worry and unload our  
troubles all,

And just get a lot of pleasure eatin' here with Lucky  
Ball.

First, we store away the biscuits and a slice of  
Lucky's steak.

And we wash it down with "coffee like your mother  
ust to make."

And then we pass the "Chancellors," and each one  
takes a smoke,

And that "makes him think of something," and he  
has to tell a joke.

Then some feller tells a story of an interestin' case,  
And we each set 'round and listen, tryin' to keep a  
placid face,

Till another has one ready, and relates some cir-  
cumstance

That corroborates the saying "The *first* liar's got no chance."  
 And, when we quit our spielin', and our little program's o'er,  
 There's always better feelin' than we ever had before.  
 And then we go home, thinkin' of our little talks and stunts,  
 And we want to meet four times a year, instead of meetin' once.  
 We're a crowd of common doctors, but the fact must be confes't  
 When you take the country over that we'll line up with the rest.  
 Sometimes, in diagnosis, we may make a rank mistake,  
 And may call appendicitis "just a common stomach ache;"  
 Or, from a set of symptoms, it may be that we'll incline  
 To say a patient's do-dad is a-pressin' on his spine,  
 Or that his jib-boom's busted, and the end's about to jam  
 Clean through his swollen liver or against his diaphragm;  
 But after all our guessin', we're about as good, I'll say,  
 As the more pretentious fellers that we meet with ev'ry day.  
 And, of course, we have some failin's, like the common run of men,  
 And each one'll dig the other just a little, now and then.  
 When you ask the Old Doc plainly now to tell you what he thinks  
 About the younger doctor, he just simply smiles and winks;  
 Then for Young Doc you'll reverse it and the question put to him,  
 And he'll say "Old Doc's a good-un but his eyes are gettin' dim."  
 We claim no great discoveries, we've made no brilliant hits,  
 But, as the old-time doctor said, we're all "just hell on fits."  
 So, with our good and evil, when you take us up and down,  
 We'll rank with other doctors in the ordinary town.  
 We are glad that Doctor Goodwin can be with us here tonight,  
 As we've said, we're common people, but we'll try to treat him right.  
 And here's McVay, from Rochester, we're glad to welcome him,  
 While we have to call him "Doc," of course, we'd rather call him "Jim."  
 Now, boys, if either one of you should happen 'round agin,  
 Don't wait for invitations, but just come and "drap right in."  
 The latch-string's always hangin' on the outside of the gate,  
 And we'll just phone to Lucky to put on another plate.  
 We're poor, like other doctors, but we'll always raise some pel'f,  
 And we'll try to plan your visit so you'll each enjoy yourself.

A letter was read from one of our members, Dr. G. W. Belshe, who is at present serving as surgeon with Fourth Missouri on the border. Dr. Belshe told us of condition of troops and other things of interest from a medical standpoint.

E. A. DUFFY, M.D., Secretary.

## HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in the courthouse at Clinton, Wednesday, Jan. 10, 1917. The meeting was called to order by the president, Dr. A. J. McNees. The following members were present: Drs. Will P. Bradley, E. C. Peelor, S. W. Woltzen, W. Cline, R. J. Smith, C. L. Landaker, A. J. McNees and F. M. Douglass. The minutes of the previous meeting were read and approved.

Dr. Cline reported a case of fibroid of the uterus in a woman 48 years old, had considerable flow at menstrual epoch, had valvular disease of the heart. She refused to have the tumor removed.

Dr. Bradley related a case ending fatally of pernicious anemia sent to the State Hospital from Springfield because of irritability; had been an aluminum factory worker, appetite good, poor assimilation, was rational to the last moment.

Dr. Cline remembered serving a similar case, worked at same kind of work but had mucoid intestinal trouble, became better for some time when relieved of bowel trouble.

Dr. McNees claimed that it required a blood count and other tests under close observation to distinguish between anemia and lead poisoning.

Dr. Landaker had a case of epilepsy that had the same symptoms but treatment gave no relief from it.

Dr. Peelor reported a case of large prostate and chronic cystitis. Washes out the bladder with boric acid solution. The man was 83 and had used catheter for twenty years. Those present advised the use of silver solution and gradually distend the bladder.

Dr. McNees read a paper on "Primary and Secondary Anemia," with report of cases. It was a complete history of the manner of diagnosing the two and the blood counts and other tests used. One case had a fibroid tumor of the fundus uteri, size not large enough to require removal; had used in this case Blaud iron combination, and arsenic and strychnia in the other; other physicians of note had concurred in diagnosis and treatment.

Dr. Bradley thought the man's case was similar to one that he related. He knew of another case in Nevada where transfusion was doing good. Dr. McNees closed by saying transfusion was thought of but to get a healthy willing subject was the trouble. The man lived about one year; the woman still under care.

The secretary read the reports of what was expected to be presented at this session of the legislature.

Dr. Bradley told of a conference held in St. Louis and believed the society should express itself in some manner toward the central Board of Control.

On motion made and passed, the society will heartily endorse the bill for a Board of Control of all the charitable institutions of the state, and a copy of the resolution will be sent to the senator and representative requesting them to favor it. The Workmen's Compensation Bill was endorsed, the Optometry and Chiropractic Bills condemned.

Some discussion was had of the society work to be done for this year. Dr. E. C. Peelor spoke of the age of Dr. Thomas A. Finley of Leesville, and his inability to get about easily and made motion to have him elected an honor member of the society and by unanimous vote it was so ordered.

F. M. DOUGLASS, M.D., Secretary.



**MARION COUNTY MEDICAL SOCIETY**

The regular monthly meeting of Marion County Medical Society was held in Hannibal, Friday evening, Jan. 5, 1917.

There were two applications for membership; Dr. Winn returned to the county and Dr. Hardesty recently established, applied and were elected by acclamation.

The tentative draft of the Workmen's Compensation and Mutual Insurance Bills were discussed and it was moved by Dr. Howell and seconded by Dr. Chowning, and unanimously adopted by the meeting that we endorse the letter already sent by the president and secretary of the society objecting to the draft in that an injured man is not given his choice of physician.

Several doctors reported interesting cases which were discussed.

MARY S. ROSS, M.D., Secretary.

**MERCER COUNTY MEDICAL SOCIETY****Meeting of December 7**

Mercer County Medical Society met in regular meeting Dec. 7, 1916, at Princeton, Dr. J. M. Perry presiding.

A very interesting paper was read by Dr. Perry on the prevention of tuberculosis, which was discussed very thoroughly by each member present. A committee was appointed by the chairman to act in conjunction with the Red Cross Service as follows: Dr. C. P. Pickett, Mercer, Drs. Rogers, Roy O. Lieuallen and B. S. Powell, Princeton.

It being time for the election of officers for the ensuing year the nominations were made and ballots cast as follows: President, Charles R. Buren; vice president, B. S. Powell; secretary-treasurer, E. E. Evans; delegate to state medical meeting, Charles R. Buren; alternate, R. O. Lieuallen; board of censors, H. Nally, G. M. Bristow and C. P. Pickett.

A very interesting paper was read by Dr. C. P. Pickett of Mercer on "Cash Basis," which was discussed by Drs. Bristow, Powell and Perry of Princeton, and Drs. Lovett and Huff of Lineville, Iowa, and Dr. Loutzenhisser of Ravanna.

A motion was made and carried that the president appoint a committee to draft a new schedule of prices and report at a call meeting Dec. 15, 1916. The following committee was appointed: Dr. G. M. Bristow, chairman, Drs. Pickett and Lieuallen.

No further business appearing the meeting adjourned.

**Meeting of December 15**

Mercer County Medical Society met in a called meeting on Dec. 15, 1916. The schedule of prices was read by the committee and discussed pro and con by each member present. The report was referred to the following committee to report a schedule at the next regular meeting: Drs. Bristow, Staey and Powell.

Ten members of the society were present and three visitors, Drs. Cullers and Ewing of Spiekard, and Smith of Ravanna.

There being no further business the society adjourned to the New Fullerton Hotel where a six o'clock dinner was served and all had a very good time.

C. J. LAWS, M.D., Secretary.

**MONITEAU COUNTY MEDICAL SOCIETY**

The Moniteau County Medical Society met in California, Dec. 16, 1916, with Dr. John P. Burke presiding. Those present were Drs. J. P. Burke, Frank DeVilbiss, J. B. Norman, H. C. Freudenberger, L. L. Latham and J. P. Burke, Jr.

Dr. Fred B. Hall of St. Louis was a visitor.

The following officers were elected for 1917: President, J. B. Norman; vice president, H. C. Freudenberger; secretary-treasurer, J. P. Burke, Jr.; delegate, J. B. Norman; alternate, J. P. Burke, Jr.

The delegate was instructed to vote for a change of the constitution of the state association so that attending members as well as the delegate can vote to elect the officers of the association.

Dr. Fred B. Hall delivered a most interesting lecture entitled "The Roentgen Ray as a Diagnostic and Therapeutic Aid."

J. P. BURKE, JR., M.D., Secretary.

**PEMISCOT COUNTY MEDICAL SOCIETY****Meeting of December 15**

The Pemiscot County Medical Society met at Caruthersville, Dec. 15, 1916. The meeting was called to order by Dr. F. A. Mayes, president, at 2 p. m., with thirteen members present. The minutes of the previous meeting were read and approved.

The president called for a discussion of an increase of fees for medical service. The subject was discussed by Drs. Byars, Hudgings, Phipps, Hendrix and Swearingen. On motion by Dr. Hudgings, seconded by Dr. Johnson, the chair was instructed to appoint a committee on publication that the fees of the members of this society be raised 50 cents for calls in incorporated towns and that 20 per cent. be added to existing fees for calls in the country.

Election of officers for the year of 1917 was then called for and resulted as follows: President, M. H. Hudgings; vice president, B. D. Crowe; secretary, H. T. Byars; treasurer, G. W. Phipps; delegate, L. E. Cooper; alternate, W. A. Swearingen. All present paid dues for 1917.

**Meeting of Jan. 2, 1917**

The regular meeting of the Pemiscot County Medical Society was held at Hayti, Jan. 2, 1917, at the city hall. The meeting was called to order at 2 p. m., by the president, Dr. Hudgings. The minutes of the previous meeting were read and approved.

The application of Dr. A. R. Conrad of Caruthersville for reinstatement was received and referred to the following committee: Drs. G. W. Phipps, B. D. Crowe, F. A. Mayes. The committee reported favorably and by ballot Dr. Conrad was duly elected.

Dr. Byars handed in his resignation as secretary of the society, which was accepted and Dr. J. W. Johnson was elected to fill the vacancy.

Dr. Mayes was voted the thanks of the society for the nice dinner prepared and served to the society.

The meeting adjourned at 3 p. m., to meet again on April 2, 1917, at 3:30 p. m., at Caruthersville.

J. W. JOHNSON, M.D., Secretary.

**POLK COUNTY MEDICAL SOCIETY**

The Polk County Medical Society met at the Viles Hotel at 11 a. m., Dec. 12, 1916. The following members were present: Drs. R. Lee Russell, A. J. Stufflebam, R. D. Dill, C. N. Hahn, John W. Coy, W. D. Drake, A. P. Mitchell, J. F. Roberts, D. E.

Hammontree and J. E. Loafman. After reading and approval of minutes of last meeting, Dr. R. Lec Russell made a report as chairman of committee on tuberculosis.

The secretary read communications from the National Association for the Prevention of Tuberculosis, also one from the Children's Code Commission. It was moved and carried that the society approve these communications.

After dinner at the hotel Dr. W. D. Drake reported a case of Addison's disease in a child of 3 years, which was discussed by the members present.

Dr. Hammontree reported a case of vesicovaginal fistula.

Dr. Hahn reported a case of fracture of the femur in a tuberculous child.

Dr. Stufflebam reported a case of cardiac hypertrophy with dropsy.

All the papers were discussed by the members present.

Dr. Roberts made a report from the Missouri Commission for the Blind, and he was indorsed as chairman of the auxiliary committee for the county.

Dr. Drake reported a case of toxemia due to the administration of santonin in a child.

Officers for 1917 were elected as follows: President, Dr. A. J. Stufflebam; vice president, Dr. C. N. Hahn; secretary-treasurer, Dr. J. F. Roberts; censors, Drs. D. E. Hammontree and R. D. Dill; delegate, Dr. A. J. Stufflebam; alternate, Dr. A. P. Mitchell.

On motion the society adjourned to meet at Humansville, on the second Tuesday in April, 1917.

J. F. ROBERTS, M.D., Secretary.

#### PULASKI COUNTY MEDICAL SOCIETY

The regular quarterly meeting of the Pulaski County Medical Society was held at the office of the president, Dr. R. E. Howlett, Wednesday, Dec. 20, 1916, at 3 o'clock, Dr. Howlett presiding.

The regular routine of the society was gone through with and the election of officers for the coming year was held, which is as follows: President, Dr. J. E. Rayl, Crocker; vice president, Dr. L. E. Rolens, Dixon; secretary-treasurer, Dr. E. A. Oliver, Richland; delegate two years, Dr. Cyrus Mallette, Bloodland; alternate, Dr. G. W. Orrick, Crocker; censor, Dr. H. C. Murphy, Richland.

The physicians of the society had invited a number of persons residing in the county to attend the clinic at the society meeting who have sore eyes, and others with heart lesions. Drs. E. P. Buddy and L. T. Post of St. Louis had kindly consented to preside at the work of the clinic which was made very interesting indeed by those two instructors. There was a good attendance of members and Dr. McComb, Casey, Billings and Herbert, all of Lebanon, were visitors. One of the objects of the clinic was to try to bring out the number of eye diseases and especially those of trachoma, which is apparently many and form a big problem in this county. What makes it seem big is the poverty and indifference of the subjects, and the indifference is the worse of the two.

A lecture was delivered in the evening at the city hall on "Tuberculosis and Its Prevention," by Dr. Buddy, and on the work of the Missouri Commission for the Blind by Dr. Post. These lectures were well received and appreciated by the public.

A dinner at six o'clock and one at midnight was given by the physicians of Richland to all the physicians attending the meeting.

This was a good meeting and if the scattered doctors of Pulaski County could find time to get together more often in this manner, problems of the sick could be better handled.

EVERETT A. OLIVER, M.D., Secretary.

#### ST. LOUIS COUNTY MEDICAL SOCIETY

The St. Louis County Medical Society met at Autenrieth's Hotel, Clayton, December 13, at 7 p. m., for the regular monthly meeting, it being also the annual banquet. The spread was sumptuous and well enjoyed by all.

Dr. E. J. Goodwin, secretary of the state association, addressed the meeting on pending legislative matters of great interest.

Dr. W. E. Leighton of St. Louis, recently returned from the European war zone, gave an illustrated talk on the surgery of the war. His stereopticon pictures were most interesting and his recital of the year and a half hospital experience on the battlefield portrayed to us in a direct way the awful horrors of the bloody war. Altogether a most interesting evening was spent.

The election of officers for 1917 resulted in the following: President, Dr. Garnett Jones; vice president, Dr. S. H. Reynolds; secretary-treasurer, Dr. E. P. Cockrell; delegate, Dr. H. G. Wyer; alternate, Dr. H. Miles; censor, Dr. Roy D. Moore.

The following were in attendance: John M. Berry, James B. Sudduth, W. R. Martin, M. Dalton, A. Conway, E. P. Cockrell, W. H. Townsend, L. W. Cape, C. L. Armstrong, W. R. North, H. G. Wyer, R. B. Denny, Roy D. Moore, H. Miles, O. W. Koch, T. T. Hoxsey, P. M. Brossard, S. H. Reynolds, F. L. Whelpley, J. H. Armstrong and Garnett Jones. Visitors: Drs. E. J. Goodwin, R. B. H. Gradwohl, Fayette C. Ewing and W. E. Leighton.

GARNETT JONES, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

#### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1916, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**FORMIN TABLETS, 5 GRAINS.**—Each tablet contains 5 grains of formin (see New and Nonofficial Remedies, 1916, p. 138). Merck and Co., New York.

**FORMIN TABLETS, 7½ GRAINS.**—Each tablet contains 7½ grains of formin (see New and Nonofficial Remedies, 1916, p. 138). Merck and Co., New York.

**VERONAL TABLETS, 5 GRAINS.**—Each tablet contains 5 grains of veronal (see New and Nonofficial Remedies, 1916, p. 92). Merck and Co., New York (*Jour. A. M. A.*, Jan. 6, 1917, p. 35).

**UREASE.**—An enzyme found in certain beans, fungi and micro-organisms which, in the presence of water, converts urea into ammonium carbonate. It is used in the determination of urea in the urine, blood and other body fluids, either by determining the increase in alkalinity of the fluid to which it is added, or else the ammonia produced by it in the fluid is removed and estimated.



**UREASE-SQUIBB.**—A standardized preparation of urease obtained from the jack bean. It is supplied in the form of powder and tablets containing 0.1 Gm. E. R. Squibb and Sons, New York.

**NEUTRAL SOLUTION OF CHLORINATED SODA.**—Solution Chlorinated Soda, Dakin.—Solution Chlorinated Soda, Carrel-Dakin.—A chlorinated soda solution, containing 0.43 to 0.48 per cent. of available chlorine, free from caustic alkali. It is prepared by treating a suspension of chlorinated lime in water with definite amounts of sodium carbonate and sodium bicarbonate and adjusting the separated clear liquid to the required content of available chlorine. The solution is not reddened by phenolphthalein. It must be protected from light. The solution has been used for the irrigation of wounds, especially infected war wounds.

**THEOBROMINE-MERCK.**—A brand complying with the standards for theobromine-N. N. R. Merck and Co., New York.

**BIARIUM SULPHATE, P. W. R. FOR X-RAY DIAGNOSIS.** A brand complying with the standards for barium sulphate for Roentgen-ray work-N. N. R. Powers-Weightman-Rosengarten Co., Philadelphia.

**BIARIUM SULPHATE, MERCK FOR X-RAY DIAGNOSIS.**—A brand complying with the standards for barium sulphate for Roentgen-ray work-N. N. R. Merck and Company, New York (*Jour. A. M. A.*, Jan. 13, 1917, p. 121).

**ACETYSALICYLIC ACID.**—Acidum acetylsalicylicum. Aspirin. The acetyl derivative of salicylic acid. Dosage: 0.3 to 1.0 Gm., repeated once in three hours until symptoms of salicylism are noted. It may be dispensed as powders (in wax paper), wafers or capsules.

**IOCAMFEN.**—A liquid obtained by the interaction of iodine 10 parts, phenol 20 parts, and camphor 70 parts, containing about 7.25 per cent. free iodine. Iocamfen is said to have the antiseptic and germicidal properties of iodine and also the analgesic, stimulating and antiphlogistic properties of camphor and phenol. It is used in dressing wounds, etc. Iocamfen is also supplied as Iocamfen Ampules, containing 20 minims Iocamfen. Schering and Glatz, New York (*Jour. A. M. A.*, Jan. 20, 1917, p. 199).

### PROPAGANDA FOR REFORM

**THE J. B. L. CASCADE TREATMENT.**—The "treatment" is exploited by Charles A. Tyrrell, New York City. It consists in the self-administration of rectal anemas by means of a device, the J. B. L. ("Joy-Beauty-Life") Cascade. The "complete treatment" includes a stick of Tyrrell's "famous Rectal Soap" and a box of the "Celebrated J. B. L. Antiseptic Tonic." The "tonic" was analyzed in the A. M. A. Chemical Laboratory and found to be a mixture of sodium chloride and impure borax, colored and perfumed. The laboratory concluded that a preparation having all the "antiseptic" and "tonic" properties of J. B. L. Antiseptic Tonic can be made by mixing 2.8 ounces common salt with 1.2 ounce powdered borax (*Jour. A. M. A.*, Jan. 6, 1917, p. 50).

**TOXICITY OF SALVARSAN AND NEOSALVARSAN.**—Claude L. Shields, M.D., Salt Lake City, reports that out of the last twenty-three injections of neosalvarsan four cases exhibited severe poisoning and one resulted in death. He reports the experience of other physicians

of severe toxic symptoms from the use of recent shipments of salvarsan and neosalvarsan (*Jour. A. M. A.*, Jan. 6, 1917, p. 53).

**Q-BAN HAIR COLOR RESTORER.**—Untoward effects from the use of Q-Ban Hair Color Restorer are reported. The Connecticut Agricultural Experiment Station reported the "restorer" to be a perfumed, alcohol-glycerin solution of 1.68 Gm. per 100 Cc. of lead acetate, containing 3.08 Gm. of free sulphur in suspension. The Connecticut report states: It is simply one of the many familiar lead acetate-sulphur preparations, and its use is by no means free from danger (*Jour. A. M. A.*, Jan. 6, 1917, p. 54).

**THE SEARCH FOR THE IDEAL ANTISEPTIC.**—R. A. Lambert has followed the effect of the same chemical agent on bacteria and tissue cells growing together in vitro. He finds that the growth of tissue cells is more easily affected by potassium cyanide, phenol, tricresol, hydrogen peroxide and alcohol than was the growth of bacteria. Iodine stands out as the one chemical tested to which tissue cells were found more resistant than were staphylococci. A good growth of cells was seen after exposure to a 1 in 2,000 solution of iodine for an hour—a strength sufficient to sterilize the tissue completely in most instances. Lambert points out that the power of iodine to dissolve fibrin may be an objection to its use as an antiseptic wound dressing (*Jour. A. M. A.*, Jan. 6, 1917, p. 40).

**IRON CITRATE, GREEN.**—H. K. Mulford Company and E. R. Squibb and Sons submitted to the Council on Pharmacy and Chemistry ampules containing solutions of iron citrate, green. It thus became necessary for the Council to consider the eligibility of iron citrate, green itself for admission to New and Non-official Remedies. As the rules of the Council provide that non-essential modifications of official or nonproprietary preparations will not be recognized, the above named firms were asked to state what advantage, if any, the so-called iron citrate, green has over the official iron and ammonium citrate. Inasmuch as no evidence was presented to show that iron citrate, green has any advantage over the well-known iron and ammonium citrate, the Council held that iron citrate, green and with it the dosage forms, were ineligible to New and Nonofficial Remedies. Advised of this decision, the Mulford Company replied that in the present case it felt bound to supply the existing demand. Squibb and Sons replied that, to give the Council its support in this matter, the sale of iron citrate, green and ampules thereof would be discontinued (*Jour. A. M. A.*, Jan. 13, 1917, p. 135).

**MORE MISBRANDED NOSTRUMS.**—Chiefly because of unwarranted therapeutic claims, the following "patent medicines" were found misbranded under the Federal Food and Drugs Act: Goff's Cough Syrup, a syrup containing some vegetable extractive and traces of iron, iodids, antimony and alkaloids.—Goff's Herb Bitters, a water-alcohol solution of aloes, sugar and alkaline carbonate flavored with peppermint.—Dander-Off, an alkaline solution of borax and white arsenic colored with coal-tar dye.—Tuber-Ku, a tuberculosis cure containing 20 per cent. alcohol.—Electrozone, claimed to contain or to liberate ozone.—Orange Blossom Female Suppositories, containing boric acid, aluminum salt, sulphate, potassium salt, sodium salt, starch and petrolatum.

—Dr. Simpson's Vegetable Compound, essentially an alcohol-water solution of potassium iodid with a small amount of vegetable extractive in which podophyllum, licorice and gentian were indicated.—Weller's Stone Root and Gin, containing 37.5 per cent. alcohol (*Jour. A. M. A.*, Jan. 13, 1917, p. 135).

ACETYSALICYLIC ACID, NOT ASPIRIN. — While Aspirin-Bayer has been omitted from New and Non-official Remedies, the product is retained under its scientific name, acetylsalicylic acid, and standards are provided to ensure the reliability of the market product. The Aspirin patent expires in February, 1917, and after this time other manufacturers may make and sell the product. One firm's brand, that of the Powers-Weightman-Rosengarten Co., has been accepted for New and Nonofficial Remedies, 1917. Hereafter physicians, when prescribing the compound, should use the scientific name "acetylsalicylic acid" (*Jour. A. M. A.*, Jan. 20, 1917, p. 201).

ASPIRIN-BAYER OMITTED FROM N. N. R.—Aspirin-Bayer is advertised to the public, indirectly by means of "vest-pocket" boxes bearing the name "Aspirin" permanently affixed, and directly by means of extensive newspaper advertising. Inasmuch as this advertising propaganda is an infringement of the rules of the Council and is against the interests of public health, the Council voted to omit Aspirin-Bayer from New and Nonofficial Remedies (*Jour. A. M. A.*, Jan. 20, 1917, p. 213).

MORE MISBRANDED NOSTRUMS.—The following "patent medicines" have been declared misbranded under the U. S. Food and Drugs Act, chiefly because unwarranted curative claims were made for them: Dr. Thatcher's Liver and Blood Syrup, claimed to cure all liver complaints and many other ailments.—Black's Pulmonic Syrup, a water-alcohol solution of ichthyol, glycerin and sugar.—Walker's Pain Destroyer, an alcoholic solution of oil of mustard, chloroform, opium and collodion.—Musterole, a mixture of lard or some similar material with oil of mustard, menthol and camphor.—Snyder's Bitters, claimed to eradicate scrofulous humors, syphilitic affections, cancerous humors and many other ailments.—"5 Drops," a mixture of eucalyptol (or a eucalyptol-containing oil), camphor, safrol, terpineol and eugenol (or an oil containing those ingredients, such as camphor oil).—Dr. Stuart's Specific Drops, a mixture of camphor, alcohol, mercuric iodid and turpentine (*Jour. A. M. A.*, Jan. 20, 1917, pp. 214-215).

PIL. CASCARA COMPOUND-ROBINS (A. H. Robins Company, Richmond, Va.). The Council on Pharmacy and Chemistry reports that Pil. Cascara Compound-Robins is an example of the innumerable mixtures of well-known drugs having nothing in the way of originality or of special therapeutic value to recommend them. The claim that the pills contain no belladonna when they admittedly contain hyoscyamus is, in view of the similar action of these two drugs, a manifestation of ignorance on the part of the manufacturer or an effort to impose on the medical profession. The promotion of this mixture as "an ideal aid to any remedial agent when a mild, medium or strong alimentary stimulant is needed" is a slur on the intelligence of physicians. The Council finds Pil. Cascara Compound-Robins not acceptable for New and Nonofficial Remedies (*Jour. A. M. A.*, Jan. 27, 1917, p. 303).

CASTA-FLORA.—The Council on Pharmacy and Chemistry reports that Casta-Flora, put out by the Wm. S. Merrell Chemical Co., is one of those complex preparations which are offered to the medical profession with plausible arguments in support of the claims made. The Council finds the claims made for this mixture of drugs—which is said to contain or represent chestnut leaves, passion flower, gelsemium, elecampane, "iodized lime," menthol and yerba santa—and for the individual ingredients thereof, extravagant and misleading. Even if the ingredients, or certain of them, were useful in the treatment of those conditions for which Casta-Flora is recommended, no one could possibly foresee the effects in any given case from this jumble of drugs. The Council holds that the prescribing of such mixtures, the action of which cannot be foreseen, is plain charlatanism and declares Casta-Flora inadmissible to New and Nonofficial Remedies (*Jour. A. M. A.*, Jan. 27, 1917, p. 303).

## BOOK REVIEWS

SURGERY, GYNECOLOGY AND OBSTETRICS, January, 1917.

This is an unusually interesting number containing twenty-one original articles, one by Dr. George Gellhorn of St. Louis, on "Hematocolpos, Hematometra, and Hematosalpinx in a Woman of 74." The leading article is from the Mayo Clinic on "The Removal of Stones from the Kidney," by Dr. William J. Mayo.

THE CLINICS OF JOHN B. MURPHY, M.D. December, 1916. W. B. Saunders Company, Philadelphia and London.

This number contains the last clinic held by Dr. Murphy, the manuscript for which the editor says in the preface lacks the additional touches customarily given by the master mind during Dr. Murphy's life. In addition to the clinic and the editor's prefatory remarks there are expressions in memoriam of Dr. Murphy by a few of those who knew him well and appreciated his wonderful talents, viz., Dr. E. Wyls Andrews, Dr. J. F. Binnie, Dr. George W. Crile, Dr. John B. Deaver, Sir Rickman J. Godlee, Sir W. Arbuthnot Lane, Dr. Ernest LaPlace, Dr. Edward Martin.

A TEXTBOOK OF FRACTURES AND DISLOCATIONS, WITH SPECIAL REFERENCE TO THEIR PATHOLOGY, DIAGNOSIS AND TREATMENT. By Kellogg Speed, S.B., M.D., F.A.C.S., Associate in Surgery, Northwestern University Medical School; Associate Surgeon, Mercy Hospital; Attending Surgeon, Cook County and Provident Hospitals, Chicago. Octavo, 888 pages, with 656 engravings. Cloth, \$6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

This is a one-volume book wherein practically every form of fracture and dislocation is considered. Each variety is amply illustrated by photographs, drawings or line tracings from skiagraphs of actual cases. The subject is divided regionally and each variety is interestingly dwelt on as to the etiology, anatomy, pathology, diagnosis and treatment. Considerable space is given to the discussion of regeneration and bone repair. The book is well written throughout and the treatment advised is consistent and rational. Physicians who have fractures to contend with will find this a useful book. C. E. H.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee  
ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

MARCH, 1917

Number 3

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION COMMITTEE { W. H. BREUER, M.D., Chairman  
S. P. CHILD, M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### RECURRENT TRANSIENT COMPLETE HEART-BLOCK\*

SELIG SIMON, M.D.  
AND  
G. CANBY ROBINSON, M.D.  
ST. LOUIS

The case to be reported seems worthy of record as an example of functional recovery of the auriculo-ventricular conduction between attacks of complete heart-block. The electrocardiograms show complete heart-block only on one occasion, but the clinical observations and history make it clear that such a condition occurred repeatedly, while records obtained between periods of block reveal but slight depression of the auriculo-ventricular conduction.

The patient, M. S., tailor, aged 68 at the time of death, was first seen on Feb. 10, 1913, when he complained of a severe and constant pain in the tips of the fingers of his left hand which had bothered him for about one year. At this time no cardiac symptoms were mentioned and a hurried physical examination revealed no abnormalities except a systolic murmur at the apex region of his heart. The systolic blood pressure was 130 mm Hg; diastolic 100 mm. The cause of the pain in the fingers was not ascertained.

The patient was seen again on April 20, 1914, during his first attack of Adams-Stokes syndrome. On this occasion the patient suddenly became unconscious on going into a warm room filled with tobacco smoke. He was soon revived by fresh air and was assisted home. He had a second spell of unconsciousness soon after reaching home, where he was seen shortly afterward. He was found in bed, conscious, with a lifeless pallor, complaining of feeling very weak. Occasionally he would retch and he had vomited several times. The breathing was regular but shallow. There was a definite jugular pulsation while the pulse at the wrist was imperceptible. The apex beat was neither seen nor felt and no sounds could be heard on repeated auscultation. The patient had many periods of momentary unconsciousness between which he complained of pain over his heart. He was given strychnin sulphate,  $\frac{1}{30}$  grain hypodermically.

The patient soon rallied materially and insisted on leaving his bed to defecate. He was given 15 minims of neutral camphor hypodermically after his return to bed. Observable ventricular activity returned gradually, at first at a very slow rate. The radial pulse and the heart sounds, which corresponded normally, were observed almost continuously for a period of one hour during which time the ventricular rate ranged from 8 to 16 per minute.

At 11:30 p. m., about two hours after first seeing the patient, he stopped breathing and again the radial pulse could not be felt nor the heart sounds heard. At this time a well-defined pulsation was observed in the jugular veins at a rate of 90 per minute. The pulse returned and from 11:45 p. m. to 1:50 a. m. had a rate of 58 to 62 per minute and was full and regular.

The patient made an uneventful recovery. He felt light-headed occasionally but was able to leave the house three days later. During these days following the first attack the pulse ranged from 62 to 78 per minute. The systolic blood pressure was 120 mm. Hg, the diastolic 74 mm. in each arm. The radial artery was noted as somewhat thickened and a brachial pulsation was visible. The examination of the heart showed a palpable apex beat in the fifth interspace just inside the nipple line. The cardiac dullness extended 6.5 cm. to the right and 15 cm. to the left of the midsternal line. A rather rough systolic murmur was heard, otherwise the heart sounds were clear but weak and distant. Fifteen minims of the tincture of digitalis per day were prescribed.

On June 29, 1914, the patient had another "fainting spell" with pains about the heart. He was said to have had muscular twitchings while unconscious. When seen shortly after the attack the pulse rate was 66 per minute and no abnormalities other than those already noted were observed.

The patient remained free from severe attacks of syncope until March 30, 1915, when he had a period of unconsciousness similar to the previous ones. An examination was made soon after the attack. The heart was apparently smaller than on the previous occasion, the cardiac dullness extending 1 cm. to the right and 11 cm. to the left of the midsternal line. The pulse was regular and the rate was 60. The systolic blood pressure was 160 mm. Hg, diastolic 70 mm.

On July 22 electrocardiograms were obtained (Fig. 1). They reveal records of normal form except for signs of slight left side preponderance. The auriculo-ventricular conduction time as indicated by the P-R time (in this instance P-Q time) is slightly delayed. These and other records will be discussed later.

The patient remained free from definite periods of unconsciousness for some months after the attack in March, 1915, although he had frequent attacks of

\* From the Department of Internal Medicine, Washington University Medical School.

dizziness. During April, 1916, however, he was observed during several typical periods of unconsciousness and at these times his radial pulse rate was about 25 per minute.

He was admitted to the Barnes Hospital on May 2. The points of interest in his hospital record are as follows:

His family history is negative as far as anything bearing on his condition is concerned. He had typhoid fever at 5 years. At 35 he had joint pains in knees, without swelling or redness for six months. During the past two years he has had a "pressing feeling" in the epigastrium, usually after eating, but at times constantly. There is no history suggesting syphilis and gonorrhea is denied. He has used alcohol very moderately and does not smoke.

The patient related that since the first attack of unconsciousness he had had attacks every two or three weeks and sometimes three or four in succession. He can sometimes tell when an attack is coming on by a feeling of pressure in the chest, but he more often "drops off" unconscious without any warning. Once he fell from his chair and broke two teeth. The last attack was three days before admission, when he had about ten spells in succession. Occasionally he has slight pain about the heart, but this never lasts long and has no relation to attacks.

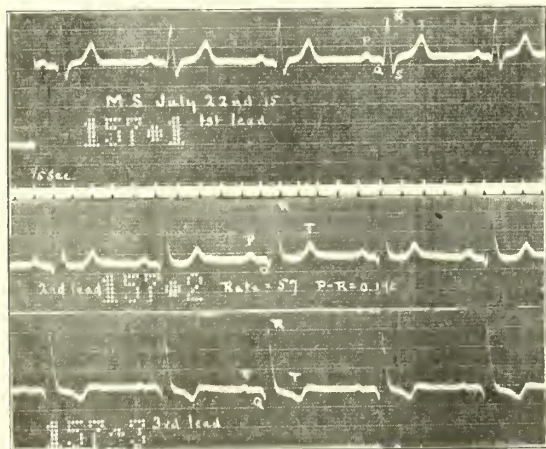


Fig. 1.—Electrocardiograms obtained July 22, 1915. The waves of auricular activity marked "P" in all records.

The patient's wife says the onset of an attack is usually marked by a cry. The attacks usually last only a few seconds, but at times unconsciousness may last ten or fifteen minutes. Sometimes during an attack the patient has "spasmodic" movements of the upper part of the body, arms and hands. The eyes are held open and are turned upward, but he never gets rigid. At other times he lies quietly without convulsions. His wife has noticed that during an attack the pulse was very slow and she has counted fifteen between beats. She says the attacks are brought on by exertion, a hearty meal or tobacco smoke and they are especially prone to occur when the patient is in a hot, "close" room.

Physical examination shows a small, rather undernourished, old man. The skin has a pasty, yellow color, but otherwise he does not look ill. For the most part the routine, general examination reveals no abnormalities. The note on the heart is as follows: The apex beat is neither visible nor palpable. The cardiac size is difficult to estimate by percussion on account of pulmonary hyperresonance. The outline of cardiac dullness extends 2.5 cm. to the right of the midsternal line, and 9.5 cm. to the left. The

heart sounds are everywhere weak. There is a soft systolic murmur over the apical region. The pulse is regular, rate 60 per minute. Tension seems normal. Vessel wall is slightly thickened. Systolic blood pressure 155 mm. Hg, diastolic 65 mm. Hg. Phenol-sulphonphthalein output 35 per cent. in two hours.

Pressure over each vagus, or over each eyeball was only slightly effectual in slowing the heart. The urine continually showed a rather low specific gravity and a faint trace of albumin. No other abnormalities were observed. Blood examination showed 5,024,000 erythrocytes, 5,900 leukocytes, 72 per cent. hemoglobin (Sahli instrument), Wassermann reaction negative. The patient remained in the hospital for two weeks, being discharged on May 16. During this time he had no fever, but a subnormal temperature. The pulse rate ranged from 50 to 75 beats per minute, and was usually about 60. The blood pressure declined gradually and the systolic pressure was 120 mm., diastolic 50 mm. before he was discharged. Rather violent exercise had no unusual effect on the heart beat. No attacks were observed. Electrocardiograms were taken on May 9 before and after exercise, but failed to show any disturbance of the cardiac mechanism (Fig. 2). The diagnosis was made of general arterial sclerosis, chronic prostatitis, chronic interstitial nephritis, heart-block with Adams-Stokes syndrome.

The patient was readmitted to the hospital on Sept. 11, 1916. He said that one week after leaving the hospital in May he had an attack and fell in the street. He had frequent attacks from this time until July 1, from which date to September 1, he had been free of attacks. Then the attacks began with great frequency and he had one nearly every day, some of which were prolonged and severe. He had been taking tincture digitalis, 5 minims, three times a day, since leaving the hospital, but discontinued its use a few days before entering.

On admission the patient seemed comfortable. There was a yellowish sallow color of the skin and the lips and nail beds had a purplish appearance. Venous pulsations at a rate two or three times as rapid as the radial pulse were observed. Lungs clear. The heart showed a point of maximum pulsation in the fourth interspace, in nipple line. Outline of cardiac dullness extended 3 cm. to the right and 9.5 cm. to the left of the midsternal line. The heart sounds were clear and the heart was beating regularly at a rate of 24 per minute. Systolic blood pressure 120 mm. Hg, diastolic 40 mm. There was no evidence of cardiac decompensation. The diagnosis of complete heart-block was made and this was confirmed by electrocardiograms obtained on the day of admission (Fig. 3).

During the next four days the patient had very many short attacks consisting of urgent dyspnea preceded by a groan-like cry. These usually lasted one or two minutes, but were sometimes somewhat longer. During the attacks there was usually no change in pulse rate observed and the patient did not change color or lose consciousness. At one time, however, a pause of five seconds was noticed in the pulse. On September 15 the patient had an attack during which he was apparently unconscious for two minutes. During this time the pulse rate was 22, but it suddenly rose to 86, then fell immediately to 40 and finally to 24 per minute. During this attack twitchings of the legs and a cry were noticed. During a later attack a heart pause of 30 seconds was observed.

During the night of September 15 the condition of the patient became progressively worse, the attacks becoming more frequent and severe. He died at 5 a. m. on September 16. A necropsy was refused.

In viewing the history it is evident that the patient first suffered from complete heart-block



with Adams-Stokes syndrome on April 20, 1914, as the attacks of unconsciousness were accompanied by an excessively slow radial pulse rate with jugular pulsations at a rate of 90 per minute. The auricles were evidently beating at this rate, and their activity was apparently independent of that of the ventricles.

The patient was not seen during any other similar attacks prior to the time when the first electrocardiograms were obtained, and when seen soon after the termination of several attacks the pulse rate was normal or but slightly slowed. There can, however, be but little doubt, in view of subsequent events, that all his attacks of unconsciousness were produced by transient complete heart-block which suddenly disappeared. The electrocardiograms (No. 157, Fig. 1) obtained on July 22, 1915, are of normal

pulse rate of 25 was noted. The statement of the patient's wife that the pulse was often very slow and that she had counted fifteen between beats is of importance as evidence that his attacks of unconsciousness were due to complete heart-block with ventricular stoppage. During the first admission of the patient to the Barnes Hospital, electrocardiograms (No. 418, Fig. 2), however, failed to reveal heart-block. The records are much like those previously obtained, although some deformity caused by fling of the string is present. A number of records were obtained before and after active exercise which failed to cause any alteration in the cardiac mechanism. Before exercise the heart rate, as indicated by the records, was 56 per minute, the P-R time being 0.20 second in the second lead. Immediately after exercise the

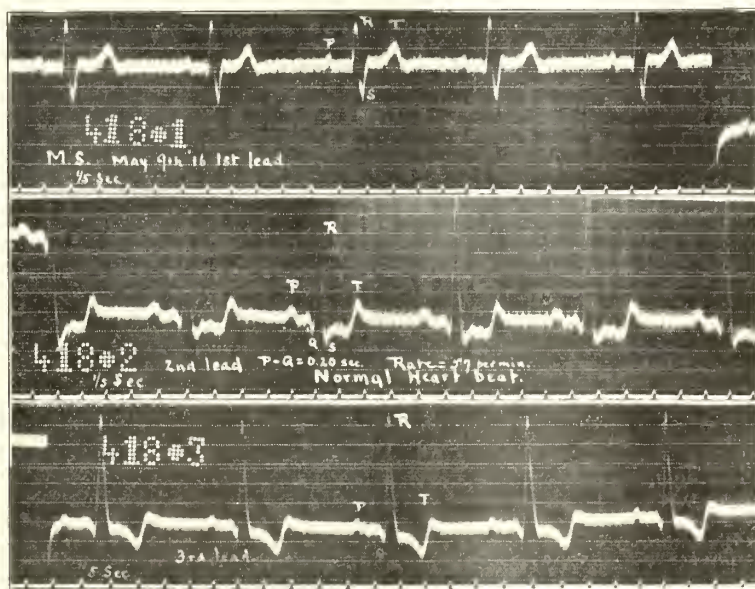


Fig. 2.—Electrocardiograms obtained May 9, 1916.

form in all three leads, except that the T wave of the third lead is a negative or downwardly directed wave. The records show the heart rate to be 57 per minute. The P-R interval in the second lead averages 0.19 second, indicating that there was but slight delay in the passage of the excitation wave from auricles and ventricles. There is a distinct prolongation of the Q-R-S group of the ventricular complexes in all leads, averaging 0.159 second in the first, 0.145 second in the second and 0.159 second in the third lead. This prolongation over the normal time of 0.10 second for this portion of the electrocardiogram indicates a delay in the passage of excitation wave through the ventricles.

Between the times when the first and second electrocardiograms were obtained the patient was again observed in an attack and a radial

rate was 57.5 per minute, while one hour later a record showed the rate to be 81 per minute, while the P-R time remained 0.20 second.

Finally, the electrocardiograms (No. 473, Fig. 3) obtained at the time of the second admission to the hospital revealed complete heart-block, the auricles beating at a rate of 84 while the ventricle rate was 20 per minute, the chambers contracting independently. Besides this derangement, the records show a striking change in the ventricular complexes, the main initial and final deflections being in opposite directions in all leads and the Q-R-S portion of the complexes being much prolonged. This portion measures 0.192 second in the second lead. These changes are those occurring with bundle-branch block in the right limb of the bundle, and indicate that the process causing

the auriculo-ventricular dissociation affected also the more distal portions of the conducting system in the ventricles. Atropin, which was withheld during the former admission because of the fear that its use might cause excessive auricular acceleration and so precipitate an attack, was now given. A hypodermic injection of  $\frac{1}{50}$  grain had but little effect on the rate of either auricles or ventricles. The record before the administration of the drug showed an auricular rate of 84 and a ventricular rate of 20.6 per minute, while that obtained sixty minutes later, when the drug seemed most active, showed rates of 86 and 26.7 per minute for auricles and ventricles, respectively.

In the history it is noted that the patient had many attacks of unconsciousness following his first admission, and complete heart-block may have become permanent during this time, al-

anism between attacks. The autopsy in this case revealed a fibrosis of auriculo-ventricular bundle. A case reported by Lewis<sup>2</sup> is perhaps the most extreme example of transient complete heart-block in the literature. His patient, a man of 48 with aortic stenosis, had numerous short attacks of cardiac syncope much like those described by our patient. By polygraphic tracings he was able to demonstrate that complete block lasting during only four or five auricular beats occurred, at which times consciousness was sometimes lost, but not invariably. The patient was living at the time of the report. It is unfortunate that we were unable to obtain records of our patient during the short transient attacks of unconsciousness which hardly interrupted his work. A second case observed by Lewis is reported by Cohn, Holmes and Lewis,<sup>3</sup> in which a thorough post-mortem examination of the

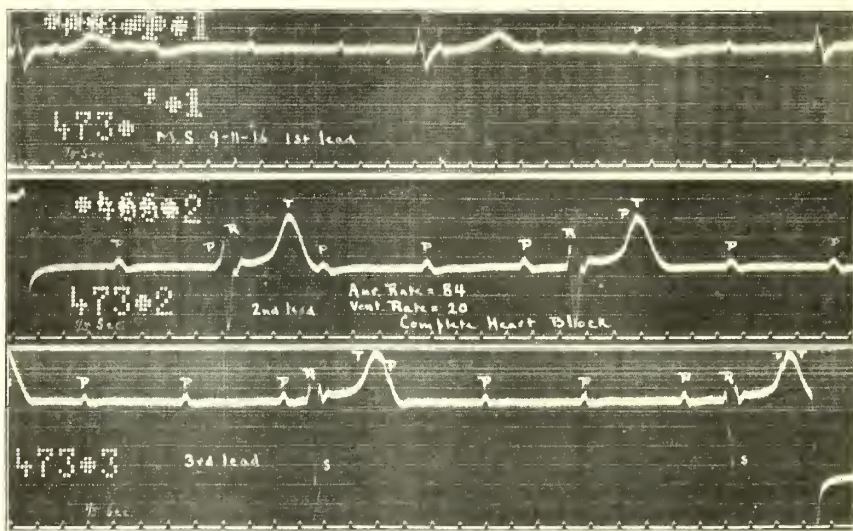


Fig. 3.—Electrocardiograms obtained Sept. 11, 1916.

though the patient was practically free from attacks for two months between the admissions.

The striking feature of the case is the sudden appearance of complete heart-block, causing attacks of unconsciousness with equally sudden, practically complete recovery, apparently without periods of partial block. The attacks caused by this sudden onset of complete block resembled true epilepsy.

Numerous examples of recovery from complete heart-block are to be found in the literature, but sudden transient attacks have been rarely reported. A case apparently closely resembling ours is reported by Barie and Clerét,<sup>1</sup> in which paroxysmal attacks of Adams-Stokes syndrome occurred with normal cardiac mech-

conducting system and the central nervous system was made. This case also had transient attacks of complete heart-block, and the post-mortem examination revealed a sclerosis and fatty infiltration of the auriculo-ventricular node and main stem of the a-v bundle. There were also found blood sinuses about the conducting system, the tissue having almost the appearance of a naevus. Engorgement of these sinuses may have had something to do with the development of complete block which followed exertion. No lesion other than arterial sclerosis was found in the central nervous system.

The case reported by Earnshaw<sup>4</sup> also has

2. Lewis, Lectures on the Heart, New York, 1915, p. 104. Observations upon Cardiac Syncope.

3. Cohn, Holmes and Lewis, Heart, 1910-11, ii, 241. Report of a Case of Transient Attacks of Heart-Block, Including Post-Mortem Examination.

1. Barie and Clerét, Arch. des Mal du Cœur, 1910, iii, 209. Syndrome de Stokes-Adames a Crises paroxystiques avec rythme bicouplé dans un cas de double lésion aortique compliquée de double lésion mitrale et de rétrécissement tricuspide. Sclérose du faisceau de His.

4. Earnshaw, Amer. Jour. Med. Sciences, 1910, cxxxix, 503. A Case of Adams-Stokes Syndrome of Prolonged Duration Ending in Apparent Recovery.



points of resemblance, but here the patient did not as a rule have nearly as complete recovery between attacks, except when the block seemed to finally disappear. An examination of the patient reported by Earnshaw, which one of us had an opportunity to make about a year after the publication of his paper, revealed complete heart-block, but at this time without Adams-Stokes syndrome. In a discussion by Norris, published as part of Earnshaw's paper, the question of recovery from complete heart-block is discussed and will not be again reviewed here.

Our case probably had an organic lesion affecting the conducting system, not only in junctional tissues but also in the ventricles. That this damage never led to partial block, but caused apparently a sudden change from the normal beat to complete block is of interest.

Erlanger and Hirschfelder<sup>5</sup> have observed that the mammalian heart may behave in a similar manner when the a-v bundle is compressed by a clamp. They found that under these circumstances stoppage may develop not infrequently out of a normal rhythm without a gradual development of partial block, and the return to the normal rhythm may be equally as sudden.

#### SUMMARY

A case is reported in which syncopal attacks occurred frequently over a period of two years, resulting from transient complete heart-block. Between attacks the cardiac mechanism was practically normal, as shown by electrocardiograms. The case illustrates the occurrence of complete heart-block in paroxysms.

600 South Kingshighway.

#### THE PRESENT STATUS OF THE TREATMENT OF CARCINOMA OF THE MOUTH IN THIS LOCALITY\*

VILRAY P. BLAIR, M.D.  
ST. LOUIS

The majority of tumors occurring in or about the mouth are epithelial, and after middle life, with few exceptions, these are malignant.

While some of the connective-tissue tumors are even more malignant than the carcinomata, on account of their comparative rarity, they are of less compelling interest.

Among the nonepithelial tumors are represented almost every form of new growth with the exception of essential tumors of certain special tissues.

5. Erlanger and Hirschfelder, *Amer. Jour. Physiol.*, 1905-06, xv, 153. Further Studies on the Physiology of Heart-Block in Mammals.

\*Read before the St. Louis Medical Society, October 14, 1916.

*Carcinoma of the Mouth.*—Carcinoma of the mouth is usually of the squamous prickle-celled variety arising from the mucous membrane, though adenocarcinoma may arise from related glands, and basal-celled tumors do occur. Even in the antrum and nose, ciliated epithelium is replaced by squamous cells before cancer develops.

Carcinoma of the mucous membrane develops much more frequently in men than in women, in the proportion of about twelve or fifteen to one. It is a disease of the latter half of life, but has occurred in children. Pond cites a case of epithelioma of the palate in a boy of 16, and Hochenegg one in a child of 6 years.

The majority of all cases can be traced to leukoplakia or some local irritation, and syphilis is supposed to be a strong predisposing factor. The general spread of syphilis and the use of tobacco in Europe toward the end of the Middle Ages are credited with producing a sudden increase in the occurrence of cancer of the mouth. Like cancer elsewhere, its frequency is still increasing.

From a very interesting series entitled "The Mortality from Cancer in the Western Hemisphere,"<sup>1</sup> by Frederick L. Hoffman, statistician for the Prudential Life Insurance Company of America, we have picked out the following data as having a bearing on our subject.

In the cities of New York, Boston, Philadelphia and New Orleans, the occurrence of cancer between 1864 and 1888 was 46.4 cases per 100,000 population; between 1889 and 1913 the occurrence was 72.1 per 100,000, an increase of all cancers to 55.4 per cent. to the quarter century. The occurrence of cancer of the mouth in several large cities is shown in the first table.

It would appear that cancer of the mouth, at least in the male, is increasing if the following data are compared with the data on the increase of cancer in general.

Between 1903 and 1912 cancers of the mouth in the male in the United States were 7.4 per cent. of all cases. In the estimate for 1915 they constituted 8.1 per cent.

Owing to their accessibility and the sensitiveness of the mouth, the whole progress of these cancers can be observed better than in any other location except the skin. Some of these precancerous lesions exist for years, some for a few months. The actual cancers themselves as a rule are rather indolent at first; and the indolent stage may exist for a long time, even years; this is especially true of cancers of the lip. A fewer number show rapid growth from the first, and the lymph nodes have been known to become infected within three weeks after the appearance of the initial lesion.

A peculiarity of the disease in this location is

1. *Jour. Cancer Research*, January, 1916, i, No. 1.

that though it always will in time infect the lymphatics of the neck and in some instances very early, in but 1 per cent. of the cases does it cause distant or general metastases. Even when the neck glands are extensively involved it is often curable, and apparent fixation of these nodes does not necessarily mean that they are inoperable, as it is only late that they become fixed to the spine and the carotid artery. Removal of all the structures of one side, with the exception of the internal and common carotid arteries, is not incompatible with life. In an old person with sclerotic arteries tying the common or internal carotid arteries is equivalent to a death warrant (Kocher).

The virulence of cancer of the mouth varies in different locations; and as a general rule the operation becomes more serious the further back in the mouth the growth occurs.

The treatment formerly was always with escharotics or by removal, but recently Roentgen rays or radium have been used. With perfected technic, radical excision with or without the aid of the actual cautery is the one means that holds out promise for advanced cancer; and from very poor beginnings this method has

cases seen in the out-service department of the Washington University clinic are not included, as we wished to draw conclusions as to the present status of treatment of the class who consult their own private physician or dentist. Most of these cases came from within an area of 100 miles of St. Louis.

Early, 12 per cent.; medium, 24 per cent.; far advanced, 38 per cent.; inoperable, 26 per cent.

Medium designates definite cancer requiring lymphatic removal, but in an early stage. Early—before demonstrable infiltration of the cells. All but one were squamous epithelial tumors.

From the histories it was evident that each of the growths had existed in a form that should have excited at least the suspicion of a carcinoma for periods varying from two weeks to thirty-six months before coming under my observation. This survey was undertaken with the idea of getting a line on the kind of advice that was given to the ordinary citizen when he consulted his own physician or dentist for a lesion of this kind, but an interesting incidental deduction was made regarding the malignancy of these growths.

	New York	New Orleans	San Francisco	City of Mexico	Rio de Janeiro	Montevideo	Buenos Aires
Cases of cancer of the mouth per 100,000 population in males.....	4.7	7.8	10.6	2.7	3.9	5.5	6.5
Cases of all cancers per 100,000 population in males.....	62.8	75.3	101.8	27.3	31.3	127.0	98.1
Cases of cancer of the mouth per 100,000 population in females.....	0.9	2.2	1.1	1.3	1.2	1.2	1.1
Cases of all cancers per 100,000 population in females.....	91.5	97.3	124.3	68.6	45.7	110.0	71.2

now reached a stage of substantial achievement and with far greater promise for the future.

Except in a comparatively few very virulent tumors, the two causes of poor results are incomplete operation and late treatment. It is difficult to conceive of more radical operations than are now being practiced, but in regard to the average time at which the disease is brought to treatment there is much room for improvement. That this unfortunate state of affairs is through educational efforts being radically improved will be shown in the study of the history of statistics of cancer in various geographic localities. From these it would seem not improbable that at no distant time the percentage of cures for cancer of the mouth, with the possible exception of those arising in the upper jaw, will be as high as for any other part of the body.

The following data are obtained from a series of forty-six referred private cases of cancer of the mouth coming under observation between Jan. 1, 1912, and June 1, 1916, and of four cases which came to the writer's service at the Barnes Hospital during the same period. The

While the 3-year-old case was an inoperable cancer of the tongue that had probably been held in abeyance by radium, still there is not the general relation between the stage of advancement and the age of the growth that one might expect. One cancer of the lip that has existed for three years was of only medium advancement, and one of the base of the tongue was probably still operable at two and one-half years after it first gave symptoms. Of eleven cancers of the lip, six were apparently very limited after an average time of sixteen months, but of those that were inoperable one had been present for one year only and one for but three months. I saw one of the lip in the outpatient department of Washington University which was apparently operable after seventeen years, but it was probably a basal-celled tumor. The only one of the six medium grade lip tumors known to have had a return so far, after radical operation, had been present but six months. The same variation is found in the tumors within the mouth. While several tumors of the lower jaw and tongue were apparently within the limit of operability after a year and a half, and one of the base after two and one-half years,



another of the base of the tongue was inoperable six weeks after the first symptoms, one of the lower jaw four weeks after it was first noticed and one of the cheek was at the extreme limit of surgical intervention three weeks after it was first detected. From this it is evident that, to the two factors usually considered in the curability of cancers, that is, the time at which treatment is instituted and the character of the operation, we must add a third, viz., the virulence of the growth; even though it is probable that the time of the presence of some of the quick growing tumors was much longer than noted.

*Precancerous Lesions.*—Probably in most of these there was present for some time before actual cancer developed a lesion that is known to predispose to such a growth. In one case there had been a chronic fissure of the lip for twenty-five years and leukoplakia, the most common antecedent, is often present for many years before cancerous change occurs. Cancer of the lip is not infrequently preceded by an injury or a herpes.

One of erysipelas two weeks after a gland operation.

One twelve hours after operation of an unrecognized thrombosis of the coronary artery after resection of the lower jaw, tongue, pharynx and glands at one operation. This was a man 75 years of age and the only one of the series to die within two weeks.

*Local Operation.*—In the six early cases there was no operative death, nor would there in any probability have been a death in five hundred or a thousand such operations, and the chance of permanent cure is inverse to the operative risk. This brings me to the chief point I wish to take up.

Of the fifty cases four were far advanced and three were inoperable within two months after they had attracted the patient's attention. These probably represent a type of cancer over which we have little control. To begin with, therefore, we have 16 per cent. in this series that are probably incurable by present methods, though education and good surgery might have saved some of these.<sup>2</sup> About four-sevenths of the re-

FIFTY CASES OF CANCER OF THE MOUTH BETWEEN JAN. 1, 1912, AND JUNE 1, 1916

	No.	Inoperable	Far Advanced	Medium	Early
Lower lip .....	11	3	2	6	..
One cheek .....	8	1	4	2	1
Both cheeks .....	1	..	..	..	1
Upper jaw .....	3	2	1	..	..
Palate .....	1	..	..	..	1
Lower jaw .....	8	3	4	1	..
Floor .....	3	..	1	1	1
Tongue .....	13	2	7	2	2
Tonsil .....	2	2	..	..	..

*Radical Operations.*—In thirty-two cases, which included the medium grade, the far advanced and the inoperable, radical cures were done or attempted by one or several operations; five being the most done on one patient before all tissues likely to be infected were removed and repair effected. In all, fifty-three operations were done upon these thirty-two patients. Of the thirty-two cases, seven died while in the hospital; an operative death rate of 21 per cent., which, although too high, but partially reflects the ordinary mortality for desperate cases.

A perusal of the causes of death is of interest. Two cases of jaw resection died of secondary hemorrhage, one fifteen days and one thirty days after operation.

Two of pneumonia, one of these ninety days after the third operation but while in the hospital. The other, a steady drinker 75 years of age, died two weeks after a complete resection of the submental, two submaxillary and one deep and superficial cervical regions at one operation.

One of gangrene of the intestine, from arteriosclerosis sixty-eight days after the second operation.

maining 84 per cent. came to operation six months or longer after they should have been diagnosed and many had been under "medical" treatment for months.

One of the lip cancers came to operation after one year's standing, another after a year and a half, another after two years' and another after three years' duration; the average at which these lip cases came to operation was thirteen months after they were plainly cancerous.

Of the jaw, tongue and cheek cancers, four were of one year's duration and two were of one and a half year's standing when they were operated upon, yet all of the foregoing cases were operated upon with some chance of cure. One apparently operable tongue case refused operation two and one-half years after the first symptom.

The crux of the situation in the 84 per cent. of cases in this series is early diagnosis. The majority of them could and should have been recognized at a time when the operative death

2. The case of cheek cancer, previously cited, that was at the limit of operability three weeks after it was first noticed has now been operated over one year and shows no sign of recurrence.

rate should be almost nil and the cures at least around 70 per cent. As it is, in this series, only six of the intraoral cases could meet these requirements.

In every series of observations of cancers of the mouth an improvement in this regard has been noted in recent years and this is true in the series here presented. Dividing the period of observation in two, there were nineteen cases in the first twenty-seven months and thirty-one in the second twenty-seven months. In the first nineteen cases there was one early case, or 5 + per cent.; in the latter thirty-one there were six early cases or 19 + per cent. This is the only improvement. The proportion of advanced and inoperable cases was about the same in both halves of the whole series.

Of twenty-six medium grade, advanced and inoperable cancers that were observed during the latter twenty-seven months, i. e., between April, 1914, and June, 1916, 16, or 61 per cent. are known to have been under observation of a doctor or dentist for periods varying from weeks to over a year before the diagnosis was established, but from the histories subsequently obtained it is evident that in every one of these cases there were sufficient data present at the time of the first examination to render the diagnosis of cancer at least strongly presumptive. In only three of the sixteen cases was a microscopic diagnosis attempted, and in these, unfortunately, the pathologist's report was misleading.

There are a number of other interesting but less important points that are suggested by a study of this series. The first is, that with rare exception the history and gross physical characteristics are sufficient data upon which to base a diagnosis from the very early stages of the growth and that microscopic findings, unless cautiously interpreted, may be fatally misleading. In three of the cases operation was delayed from nine to eighteen months because the microscopic findings were reported negative. One of these patients died after three extensive operations; one has an inoperable recurrence after five operations and the other one has but a doubtful chance of a permanent cure. The physician should not be misled by the report "does not show carcinoma," interpreting it to mean "is not carcinomatous"; this has been the cause of the fatal mistakes cited.

The practice of removing a piece of a mouth ulcer for microscopic examination is in itself not free from the danger of disseminating the disease. If the growth or ulcer is sufficiently doubtful in its character to require a microscopical examination, then the whole growth or ulcer should be removed with a fair margin; in this way the danger of fatal damage to the patient is avoided and the chances of a correct microscopic diagnosis are greatly increased. If

the whole growth or ulcer cannot be removed, then the section should be taken with an electric cautery, a portion of healthy tissue at the base and at the edge being included. Blood-good has found in the lip cancers coming to his notice, that is those in which there has been no previous treatment or section, the nodes were demonstrably cancerous in 37 per cent. of the cases, but in those where there had been partial section or inadequate treatment of any kind the nodes were demonstrably cancerous in 60 per cent.

*Use of Local Irritants.*—The next point is the evil effects of the use of irritants upon cancerous growths. The most pernicious and prevalent one is the use of silver nitrate in applications insufficient to absolutely destroy the growth. Several of these histories show that after such treatment rather indolent carcinomatous growths have been stimulated into most virulent activity. One lip cancer, under this treatment, was inoperable three months after the first appearance of the ulcer and another one inoperable at one year, yet the average age at which our lip cases have come to operation has been thirteen months.

*Delayed Infection of Neck Glands.*—In conclusion I wish to call your attention to a brief series of three cases of recurrence in the nodes of the neck after cure of the primary ulcer of the lip. The first is that of a doctor who reported to me that one year after a successful local removal of a carcinomatous ulcer from the lip he called his surgeon's attention to an enlarged submaxillary node and was told, by the surgeon, to "forget it." I saw this doctor four months after the alleged conversation and he had a stinking ulcer that extended from the open floor of the mouth to within an inch of the clavicle. The second case is that of a man from whom I removed a mass of submaxillary lymph nodes infected with squamous celled carcinoma; these nodes appeared eight years after he had a chronic lip ulcer cured with a paste and the ulcer had not returned. A similar case was seen in the out-patient department of the Washington University clinic, the nodes enlarging three years after the cure of the ulcer. The third in the series was a squamous carcinoma removed from the submaxillary nodes in a woman who, during a period of two years, had a lip ulcer that was cured without treatment three years before the submaxillary lump appeared. As far as I know this case was unique, being the only recorded one of a spontaneous cure of a presumable lip carcinoma.

All the foregoing has been given chiefly to emphasize the fact that carcinoma of the inside of the mouth, now generally regarded as one of the most hopeless forms of the disease, is so chiefly on account of largely avoidable procrastination and partly on account of pernicious



treatment. The mouth is one of the most sensitive and one of the most easily observed cavities in the body. When the public is taught the advisability of consulting a physician or a dentist in regard to every localized thickening, discoloration, crack or ulceration that appears within the mouth and which persists for more than a few days; when the physician or dentist consulted will bend his efforts toward making an accurate diagnosis rather than dismissing it as inconsequential or tentatively using various irritants in an attempt to cure it; when patients of cancer age with leukoplakia or other chronic epithelial change are warned of the danger of cancerous degeneration and of the frequently insidious nature of the onset of the change; when surgeons operating upon mouth carcinoma will make sufficiently wide local excisions and extensive painstaking regional lymphatic dissections, not curtailing the latter because the cancer is early but rather making the dissection thorough in the early cases on account of the greater chance of curing these early cases; then *and only then* will the results of operation for cancer of the inside of the mouth compare favorably with the results obtained in other regions.

Metropolitan Building.

#### GANGRENE OF THE EXTREMITIES

M. F. ENGMAN, M.D.  
ST. LOUIS

The following cases are reported to illustrate a type of gangrene that one not infrequently encounters in a large clinic.

Gangrene of the extremities is always of intense interest to the careful clinician, as many of the cases are unsolvable while others can be elucidated by careful clinical research. It has been and still is the habit to throw these cases into a clinical heap and label them and attribute most of the phenomena seen to the erratic behavior of the vasomotor system; but when a lot of them are critically studied the vasomotor system is found to be innocent of any offense.

Years will probably prove that many of the phenomena classed as vagotonia are due to definite chemical or parasitic agents acting directly upon the parts involved: In urticaria, an inflammatory storm at the point of the wheal; the various types of erythema multiforme, to grades of inflammation produced either by embolic foci of organisms, or abnormal and anomalous chemical combinations at the site of the lesion—angioneurotic edema and purpura, likewise. From the trend of modern investigation we cannot help but believe that all of the borderline conditions lying around urticaria and erythema multiforme are due to definite

inflammation of various grades and not to some obscure action of the vasomotor system. The drug eruptions—once the subject of a volume, which could be summed up in a few words, viz., that all eruptions produced by drugs were caused by the anomalous action of this drug upon the vasomotor system—are now known from our own work and the work of Jobling and others, to be due, not to the action of the drug upon the vasomotor system or to the excretion of the drug by the cutaneous glands, but to the action of the drug directly upon the tissues or the vessels at the points where the eruption occurs. Cyanosis or lividity of the hands and feet, dystrophies of the nails, changes of nutrition in the palms and soles and the ends of the fingers, exhibited by local thickenings, scalings, on to cell death of tissue and gangrene, are still most frequently classed as vasomotor phenomena.

How difficult it is without urine or blood examination to differentiate between similar conditions due to diabetes and the so-called “pure vagotonies”! The same might be said of certain atrophies and gangrenes of the extremities, formerly classed with the Raynaud phenomena, now known to be syphilitic. A Wassermann reaction with subsequent specific treatment frequently cheats the clinician of the pleasure of a diagnosis of Raynaud's disease.

We have had some extremely interesting types of gangrene of the extremities in our services and where the time and opportunity allow for proper study, a definite etiologic factor, divorced from any vasomotor phenomenon, is usually found. The case to be discussed illustrates this group.

Mrs. S. entered the Barnes Hospital, Sept. 11, 1915, complaining of sore toes.

Father and mother died of old age; no history of tuberculosis, cancer, etc. Patient had usual diseases of childhood; always was regular in her habits, not alcoholic. About 1909, the patient began to have trouble with the fingertips of both hands; they would crack open and become very sore. She did not pay much attention to the condition at first, but they would get better and worse by turns. She tried many different remedies and received no relief. Finally the third finger of the left hand became numb, but this condition did not last long. Then the fourth finger of the same hand became very swollen and blue as far up as the wrist.

She finally came to us at the office, in 1911, when the nails of both hands showed some dystrophic changes and the tips of the fingers were slightly cracked and scaly. The third finger of the left hand was dark, without sensation, and discolored for a distance of about half an inch from the tip, the process being that known as a “dry gangrene.” The fourth finger of the same hand was in the very early stages of the same process.

Under the application of heat these fingers gradually recovered and the patient dropped out of sight. She has stated, however, that she remained well until three months ago when the ball of the right foot began to pain her when she walked. This condition became gradually worse and the location became numb and cold. Then the big toe began to pain her and she thought that she had an ingrowing toenail. She

would trim the nail on both sides, but obtained no relief. Blood and pus would sometimes well out from beneath the nail. Then the second toe began to trouble her in the same way and she noticed what she thought was a corn on her little toe. She went to a chiropodist who removed the toenail and also the corn which then became very sore. Finally the condition became so bad that she entered the hospital.

The general examination showed that she was a woman of large frame, but had lost considerable weight, the skin being loose and showing numerous striae. Skin of the face and arms was brown, due to exposure. There was no general glandular enlargement, and reflexes were present and active. No abnormal reflexes. The hair was gray, rather thin. No tenderness over the vault or the sinuses. The pupils were regular and reacted to light and accommodation. There was a slight arcus senilis. Ocular movements normal. There was no obstruction nor discharge from the nose. The ears were normal. The mouth showed all of the teeth false and replaced by plates. The tonsils were not enlarged; pharynx normal. Tongue coated and without tremor. Thyroid was not enlarged. There was visible pulsation in the suprasternal notch. Respiratory movements equal on both sides. The examination of the lungs was negative.

The heart was the thing of interest. No pericardial bulging nor heaving. The first sound of the heart was accentuated, loud and distinct; the second sound accompanied by a rough, blowing, crescendo murmur, transmitted upward and to the left. At base a diastolic murmur is heard also, but the aortic and pulmonary sounds seem clear. The pulse is rather small, regular, tension is plus and the rate 90.

Examination of the abdomen showed nothing abnormal.

Extremities: The upper negative, except for fingers. The tips of the index, middle and ring fingers of each hand are blanched and slightly brownish spots are present on the dorsum. The lower extremities are smooth; a few traumatic scars; no varicose veins nor edema of ankles. The left foot negative. On the right foot there is a definite, irregular, bluish, mottled discoloration, extending up from the dorsum of the foot and over the plantar surface, slight local heat and tenderness; the great and first toes at distal third are of a deep purple, almost black color, shrunken and dry, showing a definite line of demarcation between affected and healthy tissue (Fig. 1); the nails are gone from both toes and a small amount of serous fluid may be pressed from nail-bed of great toe; there is no odor; toes anesthetic in fold.

The diagnosis was mitral stenosis, aortic regurgitation, Raynaud's disease (?), and hypertension (arteriosclerosis).

Patient was put to bed under warm-air bath, and aspirin and morphin were given daily on account of the great pain.

September 14. The small toe of right foot has been discolored since admission and this morning is beginning to show the same deep-purplish discoloration as on the great and first toes. The redness and discoloration of dorsum and sole of foot are not less, in fact slightly increased, but there is no evidence that it is of inflammatory nature. Temperature 101 F.

September 15. Right calf, 35 cm.; left calf, 35.6 cm. in circumference. Clear as to ankle. There is some disappearance of color about the end of the great toe. Small toe shows marked increase of discoloration, which has spread well around, out the sole of the foot and laterally toward heel. The discoloration on dorsum is slightly more marked. The temperature today is slightly higher; at 8 p. m., it is 104 F. Pulse 120. White blood cells 14,000,

an increase of 5,000. At 11:15 hot saline pack to foot and entire ankle.

September 16. Temperature up to 104 F. in the morning. Complained of pain in the ball of the foot. Patient's consent was at last obtained to take blood for culture, during which operation patient had a nervous chill, became cyanotic and her pulse bad. However, she recovered quickly and was soon in her usual condition. Open treatment and careful watching was decided on. There is considerable odor from the foot. No pulsation can be made out in the right dorsalis pedis artery, while it can be plainly felt in the left foot.

September 18. Patient was rather delirious during the night; complained of severe pain. Temperature 103 F. *The laboratory returned the report that a hemolytic streptococcus was growing on the blood plates.* There is a definite increase of redness on the dorsum of the foot, but the gangrene has not extended.

September 19. Since last night numerous small pinpoint petechiae have appeared over the plantar surface of fingers and forearms and over the ears. Gangrene has not apparently extended, but the deep purplish redness has increased and extended upward, and there is now considerable local heat. Foot was put back in the hot saline pack. On consultation with the surgeons, Drs. Tupper and Seelig, the unanimous conclusion was reached that amputation was inadvisable, due both to the nature of the lesion and the constitutional complications back of it.

September 20. Temperature yesterday more irregular, 102 F. in the morning and 99 F. in the afternoon. Discoloration over the dorsum continues to extend. The small toe became moist and began to discharge a small amount of reddish serum. Small doses of potassium iodid were started, ten drops three times a day.

September 21. Patient became semiconscious with stertorous breathing at 3:30. Respirations were 48, pulse 140. The lips of the patient were blue, eyes glazed, and the nails colorless, but extremities warm. Heart sounds fairly strong and regular. The pulse was weak, regular but almost thready. The patient talked at random continuously. Under stimulation she began to improve and finally dropped off into a sleep, sweating profusely. There was no chill preceding this attack.

September 22. Foot was dressed open today with four lights burning in the cradle. The temperature is 101.5 F., pulse over 100, respirations 40. Patient appears toxic and drowsy most of the time, although she is fairly rational; has received stimulus of both strychnin and whisky. Percussion of chest reveals slight impairment of pulmonary resonance at left base in axillary region, where there is definite depression of breath sounds and many crepitant râles, so loud and numerous as to obscure inspiration. Expiration not blowing. Diagnosis, bronchopneumonia.

September 23. Over the left base percussion note still impaired, respiration murmurs suppressed, but râles almost entirely absent. At right base there is also impaired resonance with coarse, crackling râles on inspiration and definite, suppressed, but not blowing expiration.

September 24. Patient is much brighter, although pulmonary condition remains the same. Temperature has maintained a constant level of 102 to 103 F.; pulse, 100 to 120; respirations about 40, but less labored. There has been fluctuation at the base of the small toe on the plantar surface near the middle of the foot. This area is here widely opened and a small amount of brownish fluid expressed. Warm air, open treatment continued. The second and third toes are beginning to darken and the redness extends as far as the ankle.

September 25. Pulse was 100, respirations 35 to 40,



temperature about the same. Lung symptoms have not increased; there is no bronchial breathing. More petechiae have appeared on the fingers and ears. The line of demarcation has definitely formed at about the tarso-metatarsal articulation.

September 29. On the right buttocks, just within the fold, are five punched-out ulcers that have been forming for several days. They are arranged in a herpetiform group and are about  $6\frac{1}{4}$  inches in diameter. They are perfectly round, superficial, not infiltrated nor inflammatory looking, no distinct areola of redness. There is redness from pressure all over this region. Away from these lesions on the buttocks is a small, red maculopapule which seems to portend a similar ulcer. The ulcers have a yellowish base, but no discharge. The tips of the fingers of the right hand are bluish-red, scaly, and show signs of nutritional disturbance. Petechiae are constantly appearing on the fingers and hands and are distinctly larger than they were at the onset.

September 30. Demarcation complete. Foot dry.

October 2. Patient is generally greatly improved; expression is animated, eyes clear, and she says she feels better. She is eating with more appetite. Temperature is gradually declining. The redness and discoloration of the foot does not seem to be progressing.

October 6. General condition about the same. There is some slight discoloration about the heel.

October 12. Several more, punched-out ulcers have appeared about the folds of the buttocks. They are deep, excavated, round, rolled, with a yellowish, sloughing base lying deeper in the skin than the former, no doubt from embolic foci. Applied dry dressing.

October 13. Temperature remains about the same and the general condition very good. There is slight change in the foot; it is dry, malodorous, with some slight discharge about the edges, and is gradually shrinking, up to the line of demarcation, showing a red, granular border at this point. The heel, unfortunately, shows some beginning gangrene. Further blood culture was suggested today, which threw the patient into a nervous condition and an attempt to obtain blood was abandoned.

October 16. Just below the external malleolus of the right ankle is a purplish spot the size of a silver quarter. In this region there has been some redness and swelling for several days. The outside of the heel has a necrotic area also, which has been gradually forming for a week or more. The gangrenous area on this foot is continuing to dry and shrivel.

October 23. The necrotic area on the outside of the heel has formed an open ulcer from necrosis of the tissues involved. The lesions in the buttock's fold have increased in size, but not in depth, except one just over the end of the spine, and from their behavior and configuration one would be justified in considering them to be due to an obliterative process or embolic process similar to that of the foot.

October 28. The patient through this long course is gradually losing strength in spite of her animated condition. She has had a great deal of continuous pain all through her illness, which was relieved only by opiates. The ulcer over the malleolus is 2.5 cm. in diameter, discharging slightly. Culture from the foot shows streptococcus albus and aureus. There is an extension of the cyanosis further up the ankle and the gangrenous portion is shriveling and dry and sunken like the withered foot of a mummy. The left heel is painful and of very suspicious color and the whole foot rather cyanotic.

November 7. The left heel at the posterior end of the plantar surface has the typical, sooty color with a very superficial blister, accompanied by some pain. The gangrenous area about the malleolus is extending slowly. The lesions in the buttocks are extending peripherally, but not in depth. The extension seems

to be through the destruction of the epidermis, as the area about the ulcers is of a smoky color for at least a half inch in each direction and the border of the smoky area is very indefinite and not defined.

November 11. Patient has been free from pain for the past week, takes nourishment fairly well. Temperature level, running between 99 and 100 F. Right foot shows slow spread of gangrenous area about the malleolus and the right heel, with some extension along the plantar surface of the foot.

November 15. Patient suffered a great deal of pain today in the left heel.

November 19. As yet unable to obtain additional blood culture. Right foot practically unchanged; rest of the gangrenous area enlarging.

November 22. There is distinct pulsation in the anterior tibial artery of the right leg, which can be felt almost to the line of demarcation. Amputation was advised.

November 23. Patient was up in a chair today for a few minutes, the first time since admission, with no increase of pain. Surgeons advise amputation of right leg high up under local anesthesia; taken under advisement by family.

November 24. Advanced gangrenous area of the foot slowly separating. Pulsation of the anterior tibial artery in the right foot easily felt.

November 27. Blood culture taken.

November 29. Reported negative, but organisms must be present, as fresh petechiae are constantly appearing. In view of the negative blood culture and the fact that temperature has been almost flat for weeks, with no tendency on the part of the disease to progress, amputation was again urged; but as this did not meet with the approval of the family, and as no further benefit could be derived from longer sojourn in the hospital, the patient was removed to her home on December 21. She stood this trip very well and seemed comfortably settled in the hands of her family doctor.

Leukocyte count in this case varied from 20,700 to 23,500. Differential count: lymphocytes, 21.5 per cent.; large mononuclears and transitionals, 5 per cent.; polynuclear neutrophils, 72.5 per cent.; mast cells, 1 per cent. Normal eosinophilia. Wassermann negative. Sputum examination negative. Blood culture showed streptococcus hemolyticus; culture free from staphylococcus aureus and albus. The temperature was very irregular, showing no characteristic curve and varying from 97.6 to 104.5 F. Pulse followed temperature rather closely.

The subsequent history of the patient is interesting. After her return home the shriveling process continued until in the course of two months the gangrenous area became detached; but shortly afterward the patient had a stroke of hemiplegia, from which she recovered, but remained paralytic.

The patient was originally referred to us by Dr. Louis Behrens, who kindly has furnished us the subsequent notes.

A case somewhat similar occurred in the Children's Hospital in a child with superficial gangrene of the extremities after an attack of erysipelas. In relation to this case, the disease described by Leo Buerger as thrombo-angitis obliterans is suggestive of gangrene in general. This disease, due to a thrombo-angitis, occurs between the ages of 20 and 40, rarely after 40, generally in Russian Jews, and usually in the lower extremities, in the medium-sized vessels, and ascends. In the foot the dorsalis pedis and plantar arteries are the most frequently affected, and it may ascend along the tibialis. It is not

an angioneurosis, but an inflammatory change, and probably due to some microbic origin.

The marvelous occurrence of the constriction of vessels due, so it is said, to spasm of the smaller vessels producing cyanosis or asphyxia, when compared to the definitely infectious cases, is interesting. For instance, a case that has been puzzling us for a good many years has just been solved.

A man, 46 years old, appeared eight years ago with a distortion of the nails, a dry, very superficial gangrene of the ends of the toes, which was exceedingly slow and formed as dry, dark crusts due to, we might say, a dry desquamation of the tissues about the toe which were gradually cast off, leaving superficial crusts. The hands and feet were cyanotic at times. A similar condition had recurred frequently on the glans penis, leaving rather deep, punched-out, pockmarked-looking scars over this region.

When we first saw him there were two round, deeply imbedded crusts on a dry base about one-sixth inch in diameter, similar in nature to those seen particularly about the toes. These crusts were gradually cast off, leaving atrophic areas.

He was studied off and on for two years. He dropped out of sight to return six months ago. In the meantime surgeons had removed all the nails of both feet, but still there continued the formation, now and then, of the dry, necrotic looking crusts about the ends of the toes. The hands and feet were cyanotic, the fingernails greatly dystrophied, and now and then the old crusts would form on the penis. He had had several salvarsans and thorough courses of mercury without any benefit.

He was put in the hospital and studied thoroughly. There was a negative Wassermann reaction, negative blood cultures, and no apparent cause could be found for the condition except foul pyorrhea about the teeth and gums. He was placed in the hands of a competent dentist and his mouth rapidly put in excellent condition. Since then the improvement in the case has been marvelous. The cyanosis has disappeared from the hands and feet and the nutritional condition of all the affected places has become almost normal. No more crusts form about the toes, the penis or the hands.

We believe it is more rational in the study of the so-called "Raynaud's syndrome" to exhaust every method of clinical research and clinical knowledge to establish a definite etiologic factor and not to attribute the symptoms to some vague, unknown, vasomotor condition. It is true the vasomotor nerves or their centers may be affected by toxins in the blood stream, but it is far more rational to assume that these toxins poison not the nerves or their centers, but the tissues where they are hooked up in the act of intermediary metabolism; that is, such toxic agents are carried to the cells of the skin or subjacent tissues by the capillaries with the nourishing lymph flow, and poisons these cells in this way. The walls of the capillaries and small vessels may also be affected.

This poisoning may be only sufficient to cause a slight inflammation in the form of an urticaria or some of the erythema group, or through its more prolonged presence cause more severe inflammation and the death of cells; or the en-

trance of a micro-organism like the *Streptococcus hemolyticus* particularly, or even the *Streptococcus viridans*, may produce embolic foci or thrombi, and in this way interfere with the nutrition of the part and produce gangrene.

The syphilitic organism, on account of its slow action and its lessened virulence, does not so frequently produce gangrenous process, as the shutting off the blood stream is due to a slow endarteritis and not to a thrombus as formed by the more virulent organisms such as the streptococci or the organism of Beurger's disease.

Wall Building.

#### THE VALUE OF EARLY TREATMENT OF MENTAL DISORDERS\*

FRANCIS M. BARNES, JR., M.D.  
ST. LOUIS

Next to the recovery of his patient, that which most interests the physician is the treatment which will bring this about. When we say treatment we should not think merely of drugs and medicines, but of everything that may be done for the patient. For many patients, and especially those of the class of which we will speak later, drugs have comparatively little value. For them the regulation of diet, exercise, work and reaction, the control of the emotions and volition, in short, a proper hygiene of both body and mind, are important factors in treatment. The wonderful advances made within the past few decades in the alleviation of sickness and disease bear full testimony to the interest which the medical profession holds in the treatment and cure of those who have become ill.

Perhaps one of the most significant trends in the advance of recent years is the rapidly growing realization that prophylaxis is more important than treatment. A thoroughly ideal prophylaxis is at the present time obviously impossible so that the nearest approach to it available must be accepted. This we find in the early treatment of disease and disorder. It is a well recognized fact that the best therapeutic results are to be obtained by instituting treatment early, before the disease process has reached such a development that local destruction of tissues has occurred or remote disorders have been indirectly provoked. The surgeon must operate early if any lasting benefit is to be derived from the removal of a carcinomatous breast. The internist must begin his treatment early if he is to accomplish the most desirable results in pulmonary tuberculosis. The oculist and the laryngologist must both treat their patient early in

\* Read by invitation at the meeting of the Gasconade-Maries-Osage County Medical Society at Hermann, Mo., Nov. 16, 1916.



the course of his disorder if the development of chronic conditions is to be prevented. The medical profession understands this well. But, also, and this is a favorable indication, the lay public is beginning to appreciate the value of early medical attention—a value which may be estimated in terms of finance as well as health. It is largely due to this interest on the part of the public, brought about by the medical profession through a campaign for popular education, that we have seen the establishment of visiting nursing organizations and clinics for the diagnosis and treatment of cases of incipient tuberculosis, the opening of institutions for the study of cancer and the construction of hospitals where every modern means for the diagnosis and treatment of physical ills is available to the general public at a minimum cost.

It seems a waste of your time to have pointed out these facts with which you are all so familiar. The purpose has been to contrast with this situation another, namely, the lack of interest in mental disease, the want of facilities for the diagnosis and treatment of beginning mental disorder and the equally great value to be derived from such early treatment when it can be provided. The lack of interest in this subject is shown primarily in our medical schools, only a very, very few of the best of which offer any course in mental medicine which could in the least stimulate the interest of the average medical student. The obvious result is that as a graduate he knows little of psychiatry and cannot be expected to have interest in something with which he is not well acquainted. The want of facilities for the early treatment of mental disorder is well known to all who but stop for the moment to think over the situation. The adequately equipped and manned mental clinics in this country hardly outnumber your fingers. The value of the early treatment of mental disorder is, however, no less than in physical disease. If one were to say it was even greater, he might be accused of bias and prejudice, although there certainly is room for argument in favor of such an opinion. If we admit, as seems fair, that the mind is the organ by the functioning of which a person adapts himself to his environment, then it seems evident that disorder in this function strikes at the foundation of our social existence.

It may occur to some to question whether treatment, early or late, is of any value in mental cases. There is a too widespread belief, not only on the part of the public, but of the medical profession as well, that mental diseases in general are incurable. No doubt, the increasing population of our state institutions unjustly fosters such a belief. However, a most casual analysis of this situation will show that a great part of this standing population is made up of limited groups of cases, such as dementia praec-

ox, a mental disease from which recoveries are infrequent, but at the same time, one which does not shorten life. Cancer, tuberculosis and other bodily diseases have a larger mortality, and therefore, such cases do not accumulate as monuments to our inability. It is not generally known that on an average from 30 to 40 per cent. of admissions to hospitals for the insane are discharged as recovered—a percentage of cure even much higher than in many of our physical diseases. And further, since voluntary admissions to hospitals for the insane have become more frequent, the percentage of recoveries has been increasing. In other words, patients are learning to come voluntarily to the hospital and are getting the benefit to be derived from early treatment of their disorder. There are at present many patients in our large state hospitals who would not need remain there, or who never need have been committed, if they had received proper treatment at the beginning of their trouble. As with physical disease, so with mental disorder, many chronic states can be prevented by adequate treatment during an incipient stage. Resultant upon those lesions of the spinal cord which occur in poliomyelitis we not infrequently see contractures in the extremities which become gradually more extensive until finally a restoration to normal by any procedure whatsoever has become impossible. In an analogous manner abnormal mental mechanisms if allowed to operate uncorrected sufficiently long lead to the development of trains of thought which in time become so fixed that no treatment instituted is capable of changing them.

It is an uncommon experience that mental disorder appears abruptly aside from such instances as follow head trauma or other physical disease, epilepsy and a few other conditions. It is unfortunately not uncommon that the early symptoms are entirely overlooked, or if noted at all are misinterpreted. For example, take the case of a man some thirty years of age, who for several weeks complained of a feeling of drowsiness and lassitude with a loss of ambition and insufficient energy to perform his work. Associated with these rather vague somatic complaints there was a sense of fear, apprehension and uneasiness with now and then traces of irritability. The general physical condition appeared to be good, and for nearly two months this individual was treated as a neurasthenic. He awakened one morning and without apparent cause hurled his baby against an opposite wall, killing it instantly. When admitted to the hospital an hour later he was in a dazed, stupid state, without insight into his condition or appreciation of what had occurred. Examination showed him to be suffering with cerebrospinal syphilis. Under energetic specific treatment he cleared up and was discharged recovered, and

has remained well for several years afterward. If the nature of his trouble had been recognized and treatment given early it is quite safe to assume that this psychosis would not have developed and its unfortunate results have been prevented. Cases similar to this are not infrequent and many are inadequately treated as neurasthenics until the full development of the psychosis forces the conclusion that the opportunity for the early institution of proper treatment has been neglected.

As has been mentioned, the beginnings of mental disorder are usually extremely vague and ill defined. The initial symptoms are most commonly not recognized clearly by the patient himself. He may come to you for various mild somatic complaints, such as disorders of digestion, queer sensations referable to the skin or certain of the viscera. Associated with these a loss of appetite, constipation and insomnia are frequent. A feeling of fear and uncertainty associated with anxiety and worry, an inability to concentrate attention and a consequent falling off in working and playing capacity are often dominant subjective difficulties. From the relatives or friends you may learn that he has become somewhat irritable, uneasy and restless, that he is inclined to be morose and gloomy and shows indifference to his former interests. His employer or business associates may report that he is falling behind in his work and that his business capacity has been noticeably decreased. Symptoms of this character have a very important meaning and should not be passed off lightly as a transient indisposition or normal peculiarity. By so doing, the most valuable period for treatment, the early stage, has been lost. We all know of cases in the beginning like neurasthenia which have later "gone over" into paresis. The fact is that we were dealing with paresis from the beginning and did not recognize it.

Again, the physician is consulted by persons whose life is being made miserable by most disagreeable obsessions and phobias, and not at all uncommon is the fear of losing the mind. Recently a man was referred to my office because of his fear of impending insanity. Some months previously he had consulted a physician because of insomnia, "stomach trouble" and various imperative ideas which would come into his consciousness at the most inopportune times. Within a few months he had seen several physicians, who had treated him in turn for "stomach trouble," "kidney trouble," "liver trouble," etc., without any betterment in the patient's mental attitude toward his condition. His complaints had been accepted as correct diagnoses and he told me that not one of his physicians had examined him. Unfortunately during this process he had somewhere gotten the suggestion that he would become insane, but throughout the several months apparently nothing was done to get

at the root of his trouble, his mental state. A thorough physical examination with entirely normal findings, careful mental examination followed by a frank explanation of his symptoms, their origin and their meaning, together with an absolutely favorable prognosis was all this patient needed to be made to realize that there was no further occasion for him to worry. This exemplifies the result of seeing such a patient early before his abnormal mental trends have been given sufficient time to become fixed as a routine mental habit.

If the condition presented by the above patient had been allowed to go on further we might find such a condition as was presented by a patient whom I saw recently. A woman, aged 50, passing through the menopause, previously in good general health, although said to be abnormally of a worrying disposition, following some trouble in her family about a year before, became irritable, fretful and forgetful, could not sleep, complained of pains in her head and legs and feared she was losing her mind. As is quite the usual thing, she had been seen by a number of physicians, her condition becoming no better. Physical examination revealed nothing of importance. She was absolutely convinced of the hopelessness of her condition, inert, apathetic and making not the slightest effort to benefit herself or follow the directions which had been given her. Although the members of the family, with the best of intentions, had done everything they knew how it was plainly evident that their ministrations did more harm than good. Isolation in a hospital for mental cases was the thing at this stage of the disorder that would aid this woman and bring about the earliest restoration of mental health, because her habits of thought had become so fixed that only a change of environment with strict control would afford the opportunity necessary that she might begin over again the reconstruction of more normal mental habits. Patients such as this last one object to going to a hospital or sanitarium for mental and nervous diseases, because of the feeling of disgrace and stigma incident to such a procedure. However, it is gratifying that medical education of the public is bringing about a growing realization that the hospital is the proper place for a person when sick. If we must wait till the disease has made such progress that the patient is finally forced into a sanitarium because of adjudged mental incompetency, then the golden opportunity for accomplishing the greatest results from our therapy applied during the early stages has been lost, and recovery, if possible, is by no means so easily assured as might have been the case if appropriate early treatment had been instituted.

These few cases which have been used in illustration occur as a not uncommon experience



in the round of medical practice. They have been selected not as the unusual but rather to point out that it is the common run of things which generally are passed by with but little thought. The fact that they are common does not, however, detract from the experience that they are usually most troublesome to handle successfully. They demand enormous amounts of time, patience and tact, and constitute such a source of worry to the busy physician that it is not surprising if at times he is relieved to have them leave to worry a fellow practitioner. And yet this relief is not sufficient to smooth out the feeling that this type of case has found something lacking in the practice of medicine. It is to the general practitioner that these patients first come and it is to him that we must look for the recognition of the underlying nature of these preinsane conditions if treatment is to be given at that early stage when it may be calculated to do the greatest good.

Humboldt Building.

#### TRICHINIASIS WITH REPORT OF THREE SPORADIC CASES\*

L. H. HEMPELMANN, M.D.  
ST. LOUIS

Human trichiniasis may be defined as an acute febrile disease due to the ingestion and development of the trichina spiralis. The trichina spiralis was first discovered by Tiedemann in 1822. Human beings become infected by eating uncooked trichinous pork. The digestive fluids dissolve the capsule which surrounds the trichinae contained in the hog's muscle and the trichinellae are liberated. They develop in the small bowel and attain sexual maturity in two or three days. The adult worms produce living young which are probably discharged directly into the lymph spaces and get into the blood stream with the lymph and then penetrate the voluntary muscle fibers. Here they develop farther, excite a myositis and gradually become encapsulated, after which they remain dormant for an indefinite period. The symptoms ensue during breeding of the worms and the invasion of the muscle.

The period of incubation varies a great deal. In the Hedersleben epidemic, in 1865, in which 337 cases of trichiniasis developed in a town of 2,000 inhabitants, 36.6 per cent. of the cases developed in from 1 to 5 days after eating the infected pork, 27.7 per cent. in from 6 to 10 days, 24 per cent. in from 10 to 20 days, and 11.7 per cent. in from 20 to 30 days. In general, it may be said that while symptoms sometimes develop as early as the second day after

ingestion, they usually set in about the fourth day.

Trichinellae have been found not only in the voluntary muscle fibers and blood stream, but also in the mesenteric glands, the serous cavities and in the spinal fluid. The encapsulated forms, however, occur only in the voluntary muscle fibers; those occurring in these other locations either perish or possibly find their way into the blood and are carried to some voluntary muscle.

*Symptomatology:* This varies exceedingly, some cases not being ill enough to go to bed while others succumb to the disease within a short time. The disease usually sets in with gastro-intestinal symptoms, especially an intractable diarrhea accompanied by a rise in temperature. Soon a general feeling of stiffness and soreness of the muscles occurs; edema of the face and eyes, at times with conjunctival ecchymosis and often with a feeling of soreness on moving the eyes, then develops. This edema of the face, with a negative urine examination, should always suggest the possibility of trichiniasis. It need not be pronounced and the muscular soreness, too, may be very moderate, not nearly so severe as in an ordinary case of gripe, for example. Typhoid-like fever is usually present, but there are frequent sweats and often an annoying insomnia. Meningeal symptoms often occur, viz., delirium, stiffness of muscles of neck, absence of knee-jerk, positive Kernig, but clear fluid on puncture. Trichinellae have been demonstrated in the spinal fluid. Albuminuria is frequent and the diazo reaction is usually positive. The examination of the blood usually shows some diminution in the number of red cells and a moderate leukocytosis (10,000 to 20,000). The most striking thing though is an increase in the eosinophils and a moderate increase in the mononuclears. This eosinophilia may occur as early as the eighth day after the ingestion of the infected meat, but usually occurs somewhat later. It persists, although only of moderate intensity, for months and at times for years after the attack. Trichinellae have been demonstrated in the blood repeatedly. The blood is laked with 3 per cent. acetic acid centrifuged and the sediment examined.

*Diagnosis:* A febrile disease, accompanied by edema of the face, the urine being normal, and eosinophilia, practically always means trichiniasis. The diagnosis can be clinched by demonstrating the worm in the blood or spinal fluid or in a piece of excised muscle. In passing it may be remarked, however, that it is not always easy to demonstrate the trichinellae in the muscle as serial sections are at times necessary to find them.

*Prophylaxis:* The disease is easily pre-

\* Read before the St. Louis Medical Society, November 30, 1916.

vented by avoiding raw pork. Thorough cooking, baking or frying destroys the worm and makes even trichinous pork safe. Ransom (*Journ. Agricultural Research*, Jan. 31, 1916) states also that refrigeration at +5 F. for twenty days destroys trichinae, and that meat so refrigerated is safe. A good many cases are traced back to eating infected sausage and it is interesting to note that home-made sausages are much more dangerous than those prepared in large commercial establishments. Home-made sausages are usually prepared from the meat of one or two hogs and if one of these is infected one gets a large dose of trichinae. As a rule, in large commercial establishments sausages are prepared from scraps of many hogs and thus even if one hog is infected the number of trichinae in any given amount of sausage is small.

*Meat Inspection:* I have been informed by the chief of the Bureau of Animal Industry that the U. S. Government does not make any microscopic examination of pork for trichinae. The government takes the stand that it would be a very expensive and time consuming thing to make the inspection thorough, while an incomplete examination would give a false sense of security. Besides Stiles says it is a mis-custom ("Unsitte") to eat uncooked pork and any one doing so must assume the risk. While this is in the main true, still I think many cases are infected accidentally by eating insufficiently cooked pork. Any one who eats a ham sandwich, for example, is liable to infection as it is difficult to be sure that the central parts of the ham have been thoroughly boiled.

*Prognosis:* The prognosis varies in a direct ratio to the number of trichinellae ingested. In some epidemics the mortality has reached 30 per cent., but it probably does not exceed 3 to 5 per cent. in the sporadic cases. One attack confers no immunity.

Treatment is symptomatic. Recently, B. F. Salzer (*Jour. of the American Medical Association*, 1916, LXVII, p. 579) has reported two cases in which the use of an immune serum (obtained from patients who had recovered) caused a rapid improvement and cure of the disease, the temperature dropping to normal within forty-eight hours. Normal serum, salvarsanized serum and salvarsan have no effect on the disease.

*Frequency of Infection:* Trichiniasis is looked upon as rather a rare disease, still Herbert U. Williams of Buffalo, N. Y. (*Journ. of Med. Research*, 1901, Vol. 6) found evidences of old trichiniasis in 5.3 per cent. of 505 consecutive autopsies on bodies of persons dying of diseases other than trichiniasis. This means either that in many cases the disease is so mild

as not to produce symptoms, or, and I think this is more probable, that we are overlooking many cases. It is partly for this reason that I have brought the subject to your attention and that I wish to report the following three cases of sporadic trichiniasis. While it is true that trichiniasis often occurs in epidemics, I believe that the sporadic cases are not infrequent and are often incorrectly diagnosed. It is relatively easy to conclude that there is something wrong with the food if a number of persons who have eaten together are stricken, but the diagnosis is not so simple in the sporadic cases.

CASE 1.—German minister, 47 years of age, was seen with Dr. W. E. Holdenreid on Aug. 13, 1914. He was stricken with a severe diarrhea, nausea and pain in abdomen nine days before I saw him. There were twenty to twenty-five liquid stools a day and the diarrhea was rather rebellious to treatment. Moderate fever developed on the sixth day of his illness and persisted up to the time of his death. There was moderate pain and stiffness in the voluntary muscles which were rather firm to the touch. The eyes were moderately swollen since the eighth day. The urine showed a faint trace of albumin, no sugar, no casts and an occasional leukocyte. A differential blood count made on the ninth and again on the eleventh day of his illness showed:

	Ninth Day Aug. 13, 1914 Per Cent.	Eleventh Day Aug. 15, 1914 Per Cent.
Polymorphonuclears .....	45.3	37.8
Large mononuclears .....	5.7	9.4
Small mononuclears .....	4.3	5.2
Eosinophils .....	44	46
Transitionals .....	0.7	1.2
Mast cells .....	0.0	0.3

Leukocyte count, August 15 (eleventh day), was 8,200. No trichinellae could be found in the blood taken the eleventh day. At my second visit on the eleventh day of his illness, the patient's fever had subsided slightly and he was fairly comfortable. He had improved still more by the fifteenth day and his temperature had gone down to 100 F. in the evening. On the seventeenth day of his illness (Aug. 21, 1914), he felt well enough to dictate some letters and sat up in his chair while his bed was being made in the morning. At about 4 p. m., that day he was seized with a sudden severe pain about the heart, his face was blanched and he became pulseless. He spat up some bloody sputum and died six hours after the onset of this attack, apparently from a pulmonary embolism. A piece of the biceps showed many trichinellae surrounded by a zone of small round cells.

CASE 2.—A contractor, American, aged 45 years, came in to see me on March 31, 1916. He stated that he was weak and did not care to work, although he had been at his office every day. His bowels had been loose for ten days, three to four movements a day, and he had had aching of the muscles for the past week. He had consulted his oculist a week before coming to me on account of pains about the eyes and, on questioning his wife, she said his eyes were slightly puffy at that time. His temperature was 98.6 F., pulse 84. Urine showed a trace of albumin, no sugar, moderate indicanuria and no casts. Physical examination was negative. A routine blood examination was made which immediately showed an eosinophilia. A differential leukocyte count showed:



	March 31, 1916 Per Cent.	April 4, 1916 Per Cent.	April 9, 1916 Per Cent.	June 15, 1916 Per Cent.	Oct. 13, 1916 Per Cent.
Eosinophils .....	38.5	31	40	18.4	10
Polymorphonuclears ...	36.7	47	32	47.2	53.2
Large mononuclears....	20.4	12	20.4	25.6	12.8
Small mononuclears....	2	10	4.8	8	24
Transitionals .....	2	0	0.8	0.8	
Mast cells .....	4	..	2		

No trichinellae could be found in the blood stream. On questioning he stated that he never ate pork "on account of his stomach," but acknowledged that he frequently ate ham sandwiches for lunch when in a hurry. The patient was confined to his bed for about a week. His temperature never went higher than 101 F. and, aside from a feeling of stiffness of the muscles and weakness, he felt pretty well. After ten days he was well enough to go to his office for a short time, but continued to complain of stiffness of the muscles of the legs and weakness for two months. A blood count made on Oct. 13, 1916, six months after infection, still showed 10 per cent. of eosinophils.

CASE 3.—Male, 44 years of age, an orthodox Jew, came to see Dr. John Green, Jr., on account of swelling of the eyes on April 24, 1916, and Dr. Green referred the patient to me. He stated that he had not felt well for some days. Temperature 101.6 F., pulse 100 and respirations 16, at his first visit to Dr. Green's office. The tissues about the eyes and the whole face were swollen, while the conjunctivae were so edematous that they protruded between the lids when the eyes were closed. The parotid region was somewhat swollen, too, so that the picture somewhat resembled mumps. He denied having eaten any food which was not "Kosher" and said he had had no diarrhea or other gastro-intestinal disturbance. A blood smear promptly showed an eosinophilia, however, the differential count being:

	April 24, 1916 Per Cent.	April 29, 1916 Per Cent.	April 30, 1916 Per Cent.	May 9, 1916 Per Cent.
Polymorphonuclears .....	63.5	58.7	57	51.2
Large mononuclears.....	19.6	8.3	12.5	31.2
Small mononuclears.....	0	2.1	1	0
Eosinophils .....	16.5	30.4	29.5	15.6
Transitionals .....	4.4	0.5	....	2

Total number of leukocytes on May 1, 1916, 12,400. On May 5, 1916, 9,600. Some fever powders were given at this time and he was told to report again the following day, but did not show up for five days, at which time I visited him at his home and persuaded him to go to the hospital. No trichinellae could be found in blood taken April 30, 1916, by Dr. Rudolph Buhman or myself, and neither could they be demonstrated in the spinal fluid obtained on May 2, 1916. The patient had fever of 100 to 102 F. for the first week, complained of pain and stiffness in the muscles of the arms and legs and in the diaphragm as shown by pain on coughing or laughing. A piece of the deltoid excised on May 6, 1916, showed a few trichinellae, although a number of sections had to be examined before one was found which contained the worm. The patient left the hospital well on May 20, 1916, and I have lost sight of him since that time.

I think the fact that these three cases of sporadic trichiniasis have come under my observation in the last two years should emphasize the fact that trichiniasis is not so very infrequent in the vicinity of St. Louis, and that we must think of this possibility when confronted by an obscure febrile disease. The fact that two of these three cases first consulted oculists under the impression that there was something wrong with the eyes shows how necessary it is for oculists particularly to be familiar with the picture of this disease.

626 Metropolitan Building.

#### COOPERATION AND LOYALTY OF MEDICAL MEN IN LOCAL COMMUNITIES\*

M. P. OVERHOLSER, M.D.  
HARRISONVILLE, MO.

Success of the medical profession of any community we all understand is largely dependent on the competency and efficiency of its members. While this is true to a large extent, yet we should all realize that there are numerous other requirements necessary for the highest attainment of the profession which are too frequently overlooked and ignored by physicians generally.

Aside from a thorough knowledge of our work, I believe there is nothing more conducive to the welfare and prosperity of medical men of a local community than a practical system of cooperation with a manifest loyalty of its members to each other. A rule which holds good in the majority of cases in business life is that individual business welfare as well as personal welfare depends in a very great measure on due regard for the welfare of others.

Selfish motives, selfish acts, and selfish interests, with no regard for the welfare of our fellow men, is the wrong road to a successful business career, more especially that of a physician. There are comparatively few if any who can accomplish great things in life by ignoring or usurping the rights of others. It has been demonstrated time and again that the greatest advancement of the medical men of a community can be accomplished by professional cooperation. The old maxims, "In unity there is strength," "United we stand," "Divided we fall," are just as true in the medical profession as in any other profession or great undertaking in life. When we realize the almost unlimited possibilities for good work in medicine and surgery by a cooperative and united force of strong medical men of a community, this subject should be of vital interest to each one of us.

It is the opinion of many that if there is one thing more than another which inspires the public with confidence and respect for the medical

fraternity it is a manifest cooperative spirit with evidences of faithfulness and loyalty of its members to one another.

We can all clearly see that there can be nothing which tends more to injure our profession and forfeit the esteem of the public than constant aggressions and antagonisms of its members, retaliation for real and supposed wrongs, misrepresentation of facts, dishonest methods of work, misleading insinuations and deceptions, all of which might be embraced under the term "disloyalty."

It is a settled fact that competency and efficiency cannot win high public esteem for the medical profession if dishonor, dishonesty, aggression, antagonism, disloyalty and selfish rivalry and competition form its code of ethics. To succeed as we should succeed as medical men we must be honorable in our business dealings with each other and observe such ethical business principles as should govern all men in their social and business relations with each other.

A good work accomplished by dishonorable methods is not sanctioned by the critical public mind of today. Ethics in life is as essential to the business success of a professional man, in the majority of instances, as knowledge and efficiency. Competent men with no regard for ethical laws will find themselves struggling against strong opposing forces from all sides.

It is my opinion that few things would be more disastrous to the medical profession of a community than the decay and death of a long established standard of a practical, regulative, equitable system of professional ethics. In every community medical men should have a standard of duty to each other and each physician should strive to maintain that standard with unquestioned loyalty. If we as a profession can hope to maintain the honor and dignity of the true science of medicine and check the great inroads now made on it by the gradually increasing number of irregular and unworthy systems we must realize the important fact that it cannot be done by disorganization, lack of cooperation and disloyalty in our own ranks. And yet it is to be regretted that we have in most every community physicians who stand aloof and ridicule organized and cooperative work, and thus assume a hostile attitude to the very best methods which could be adopted for their own business success as well as that of others, and especially the good of the public.

Indifference of local physicians to cooperation and organization is equivalent in most cases to open opposition to a harmony and unity of medical forces of a community and is a clear example of disloyalty to the profession.

The maxim "live for yourself" is wrong; so is the maxim "live simply for others." Hence, a compromise is the only possibility. While we labor for ourselves we are all under obligations to manifest a due respect and due regard for

the rights, privileges and welfare of others. Between these two extremes, selfish interests and the interests of others, lies the great field for the practice of ethics in our social and business relations with each other.

The acts required for continued self-preservation, including the enjoyment of benefits achieved by such acts are the first requisites to universal welfare. Each must care for himself. This is not only right and ethical but it is a duty. Rational ambition which excludes unworthy means and spurns intrigue is one of the noblest passions that could be conceived, but between the true, ambitious man and the intriguer is all the difference that separates beauty from unsightliness and ugliness.

It has been proven in many communities that where medical men, instead of working separately with antagonistic methods, unite their forces, they severally reap more good and do far better and far more work in their professional calling. Under such conditions each loses less from antagonisms, and the influence and power of the profession grow as mutual interests are advanced. The private business interests of the individual engaged in professional work are on an average better subserved, not only in proportion as he himself refrains from aggression, but also on the average in proportion as he succeeds in diminishing the aggressions of his fellows upon one another. The prevalence of antagonism among those around impedes the activities carried on by each in pursuit of satisfaction. The maxim that "honesty is the best policy" means that experience has proven the fact that we gain more in life by equitable dealings with our fellow men than we could gain by unfair and dishonest methods. What we might make by dishonesty and unethical methods does not equal what we lose by future antagonisms.

While we must all recognize the fact that men's natures will continue to remain imperfectly adapted to an ideal social and ethical business life, and there will always continue in them impulses which cause in some cases the actions we name unjust and in other cases the actions we name unkind, now in word and now in deed, yet all who are human are as capable of loyalty as they are of reason and the humblest can be as true-hearted, as loyal and as ethical as the greatest.

The record of our lives each day is a record of acts of egoism and altruism. Egoism prompts us to act for our own selfish interests. Altruism prompts us to act for the interest of others. In individuals we find a wide range of difference of motives, ideals and purposes of life. The lives of most individuals seem to be distinctly characterized by egoistic or individualistic energisms, while the lives or acts of others seem to be characterized by a more distinctly altruistic purpose.



Naturally we are all egoistic and altruistic. Our motives are always complex. They are never absolutely egoistic or absolutely altruistic, but mixed. However, in the honest, upright, loyal, ethical and square man—a man whose business dealings with his fellows and competitors are honorable and right—there is a proper balance between his egoistic and altruistic impulses and acts.

We all realize that naturally the conscious desire to benefit one's self is stronger as a motive than that to advance the interests of others. This is as it should be. However, perhaps we do not all realize as we should, that it is not only possible to advance our own individual interests without seriously interfering with or injuring the interests of others, but that it is possible to advance in a very large measure the interests of all concerned in a given calling, in a given community by cooperation of efforts, union of forces, harmony of action, fidelity to the cause and an unflinching and unswerving loyalty to each other.

We should remember that in cooperative work we do not lose our individuality nor our individual interests, for individual interests as a rule are greatly increased by such methods of work. Under all conditions of work let our motto be: Be an individual; seek your own individual good; seek that good thoroughly, unswervingly and unsparingly, with all your heart and soul; but in so doing be a loyal, ethical individualist. Ethical individualism in its broadest sense is one of the crowning glories of true manhood. In this age of keen rivalry and sharp competition modern individualism seems to be gradually growing more and more egoistic. There can be no question that there is even now in most local communities too much egoism in the medical fraternity.

I feel that as members of the medical profession we have been greatly deficient in the knowledge and practice of some of the important philosophical, rational, ethical truths which are most applicable and practical in our business relations with each other, and which would greatly enhance our business interests severally and collectively, and not only benefit us materially, but would enable us to render far better service to the public.

In view of these existing conditions those of us who feel and realize the great possibilities of a local profession for great and good work in medicine and surgery by an exemplification of an altruistic loyal spirit of its members, are desirous of impressing on our minds the vital importance of this subject, and of a sincere and earnest endeavor to present it in such a way as will lead us to see clearly the practicability and great benefits to be derived by the adoption of such methods and such principles in our work as will attain the highest success in the profession.

What we want and what we need is a method

of finding our way out of the maze, a principle or system that shall unify our professional lives and that shall enable us to solve its paradoxes, overcoming division by unity, discord by harmony, antagonism by cooperation, aggression by loyalty; and thus to build up in our own county a most effective force of medical ability by a union of its medical and surgical talent and skill and thus lay the foundation for accomplishments which cannot now be estimated. Unquestionably this is a possibility. Its success depends entirely on the cooperative support of each individual member of the profession of our county.

In order that the members of our county may obtain a full and complete knowledge of cooperative work of physicians in various local communities and the splendid results which are being achieved where such a plan is adopted I beg the privilege of offering a few closing suggestions. First, that our secretary be instructed to send for the following articles, the small cost to be paid out of the funds of the society:

Team Work, by J. T. Rodgers, *Journal-Lancet*, Oct. 15, 1915.

Cooperation among Doctors, by H. B. Knapp, *Journal American Medical Association*, May 16, 1914.

Getting Together in Kansas, by S. J. Crumrine, *Journal American Medical Association*, Feb. 15, 1913.

Cooperation in Medicine, by J. H. Gutmann, *Albany Medical Annals*, October, 1912.

Professional Cooperation, by F. Poe, *Journal Kansas Medical Society*.

Opportunities, by W. A. Wescott, *Journal American Medical Association*, Aug. 10, 1912.

Cooperation, by C. F. Abbott, *New York State Medical Journal*, June, 1912.

A Group Study Plan for a Diagnostic Team, by F. W. Birtch, *Journal American Medical Association*, May 27, 1916.

Team Work in Medicine, *Journal Kansas Medical Society*, September, 1916.

Medical Partnerships, So-called—Group Plan, *Bulletin of the Medical and Chirurgical Faculty of Maryland*, June, 1916.

Also that our secretary should be instructed to send for other helpful instructions from time to time along this line and that one of these articles be read at each regular meeting of our society and that we make the subject of cooperation of the medical profession of our county a subject for discussion on each program for some months to come, until we all become thoroughly familiar with the methods suggested in these various articles, with a view of outlining and adopting some definite, practical plan which will receive the approval and support of the members of our organization, of an ethical, systematic, thoroughly organized and worthy system of cooperative work by the physicians of our county.

## FACTORS OF SAFETY IN SURGERY

ILLUSTRATED BY ONE HUNDRED CONSECUTIVE CASES \*

WILLARD BARTLETT, M.D.  
ST. LOUIS

The series embraces the first 100 patients operated on by me in a St. Louis hospital for a period of a few weeks following my August (1915) vacation.

One fatal case and difficult or puzzling cases are given in detail, the others being mentioned only in sequence.

All of my corps, from the anesthetist to the intern, are full-time employees with no other interest than the care of my patients, hence have *esprit de corps*. We all consider ourselves part of a machine for the accomplishment of a definite purpose, and all seem to reflect fully my own satisfaction or disappointment in the hospital happenings.

It can be deduced from reading the case histories that a painstaking examination is made of every patient before operation in an endeavor to gauge his capacity of resisting surgical damage.

The patient's condition governs the choice of the anesthetic, and a skilled professional anesthetist is employed for the administration of the general anesthetics. Ether is chosen as the standard of general anesthetics, given by the open-drop method, or where necessary by the intrapharyngeal or intratracheal methods, and nitrous oxid gas and oxygen are used when indicated. Local infiltration anesthesia with novocain is very frequently employed and is now used in our hands where previously the more dangerous spinal anesthesia was employed.

It is perfectly obvious that good surgical results cannot be obtained without the utmost care for operative details, meeting the conditions in a thorough manner with a celerity compatible with the above. The technic is presupposed as is that of a finished pianist.

The after-treatment is of an order only possible when a private salaried assistant lives in the hospital watching every turn of affairs. When gastric lavage or hypodermoclysis is required he is at hand to give it without any waste of time. He knows the patient's intake and output, watches the blood-pressure, and detects the first sign of acidosis by the presence of acetone in the urine. He makes blood-cell counts when indicated and keeps accurate reports of these findings and treatments on a special third hour chart.

The histories of the interesting cases are as follows:

CASE 1.—Mrs. L. N., aged 30. Present complaint: Bloating and pain in the stomach.

History of present illness began about two years ago with an attack of what was called "gastritis." There were about six such attacks, all alike, and now she is never free from similar trouble. The attack begins with bloating and pain in the stomach which is general at first. She takes a cathartic, then lies down and sleeps. Six months ago this patient had both kidneys decapsulated by me for chronic nephritis, which caused a constant ache in both kidney regions, sick headaches with vomiting, bloody urine, suppression, this condition having existed eleven years previous to the operation. She reports having had no headaches or vomiting since that operation and feels fine.

Objective symptoms: Weight 134 pounds. Blood pressure: Systolic 145, diastolic 90, hemoglobin 90. Clotting time 4 minutes. There is a systolic murmur at the apex of the heart which is enlarged downward and to the right. The lungs are normal. The urine contains a slight trace of albumin and coarsely and finely granular casts.

Provisional diagnosis: Chronic appendicitis.

Recommended appendectomy under infiltration anesthesia with 0.5 per cent. novocain.

Operative findings: Through a McBurney incision of small size we removed an appendix which was long, thick and in part of its course atrophic, having a distended tip. Closure of the wound was made in layers.

Macroscopic diagnosis: Chronic appendicitis.

The postoperative course was uneventful and the patient went home one week after operation having had no pain or trouble of any kind. The urine examination showed the specimens to be loaded with casts, mostly coarsely granular, and many epithelial cells. There was a trace of albumin but no acetone or indican.

These urinary findings show the presence of the disease, still the subjective condition has been vastly better since the decapsulation.

We did not risk a general anesthetic here on account of damaged kidneys, but felt that the appendix had to be removed since it imposed a load on these organs.

CASE 2.—Miss G. H., aged 26. Present complaint: Nervousness.

History of present illness began six years ago when she first noticed the goiter. It disappeared until six months ago when, during an attack of continuous fever, it reappeared and has grown steadily since that time. There has been greatly increased nervousness with the recent growth of the goiter and loss of weight and strength for about six months. A few weeks ago the patient was more comfortable sitting than she was when lying, but now she sleeps without a pillow.

Objective symptoms: She appears to be on a tension; the pulse varies from 108-132, and the blood-pressure is systolic 110, diastolic 65. There is a distinct bruit in both superior thyroids, but no thrill is felt. The right heart is dilated, the apex being one half inch outside the mammillary line and there is a dulness over this area with a bruit at the apex. There is a fine tremor not very marked.

She has coarse black hair, some gray, has hair on the upper lip and her skin is coarse.

Provisional diagnosis: Exophthalmic goiter.

Recommended: Primary ligation; later thyroidectomy.

\* Read at the meeting of the St. Louis Medical Society, May 20, 1916.



Operations and findings: Through a short high incision, we ligated the entire left upper pole including several branches of the superior vessels.

One week later we ligated the superior vessels entering the right upper pole.

Both the ligations were done under local infiltration anesthesia with novocain, the pulse ranging from 120 to 140.

During the time which elapsed from the ligations to the thyroidectomy, a period of five months, the patient gained 21½ pounds, the pulse quieted to 68 and the blood pressure was 150. She had only one headache, two vomiting attacks and practically no nervousness. The heart sounds were normal with no hypertrophy or dilatation. There was no palpitation or shortness of breath, but the goiter remained large.

Operation: Through a Kocher collar incision, we removed the right lobe and two thirds of the left lobe of a very adherent goiter which presented many enormous new blood vessels. On account of oozing from the thyroid surfaces, two gauze packs were left in the wound and complete closure made to the pack.

Macroscopic diagnosis: Hyperplastic goiter.

The thyroidectomy was done under ether anesthesia, the pulse ranging from 90 to 105 during the operation.

Postoperative course: The patient went home two weeks after the operation, having had an uneventful recovery.

This case demonstrates our method of insuring the patient's safety in aggravated hyperthyroidism. Prolonged rest in bed, preliminary ligations and waiting months for the subsidence of toxic symptoms rob thyroidectomy of its dangers in the absence of advanced organ degenerations.

CASE 3.—Mrs. R. M., housewife, aged 50.

Present complaint: Pain in the epigastrium and vomiting.

Personal history: Her general health is failing, she is nervous, losing weight and sleep.

Gastrointestinal: There is complete loss of appetite, vomiting and constipation.

History of present illness began three months ago with vomiting, which has continued at intervals of two weeks ever since. She has lost a great deal of weight and strength. The digestion was good until the onset of this trouble. During the attacks of vomiting she is constipated and the urine is scanty. She vomits what she eats about two hours afterward; at times she vomits greenish fluid, and sometimes the vomitus looks like coffee grounds. She never was sick until three months ago when she first noticed the pain in her stomach, just before vomiting.

Objective symptoms: The patient is pale, the temperature is 99°, pulse 100, and respirations 18. The heart and lungs are normal, the blood pressure systolic 124, diastolic 86, the hemoglobin 75 per cent., and the clotting time is four minutes. The urine contains albumin and casts.

The abdomen is sunken, of normal configuration and symmetry. In the midabdomen, 2 inches above the umbilicus, is felt a hard spherical mass the size of a hickory nut which moves with respiration. Splashing is apparent and the stomach falls below the umbilicus.

Provisional diagnosis: Carcinoma of the stomach.

Recommended: Gastrectomy.

Operation and findings: Through a high incision 1 inch to the right of the midline, we found the stomach high, of about normal size and presenting a tumor the size of a hen's egg at the pylorus. There were hard glands in the greater and lesser curvature, high up,

also following the structures leading to the under surface of the liver. A posterior suture gastroenterostomy was made.

Macroscopic diagnosis: Carcinoma of the stomach.

Postoperative course: Three days after the operation the patient was in good condition, the wound healing by first intention. There were no râles in the lungs, no dilatation of the heart but the pulse was very rapid. The blood-pressure was systolic 135, diastolic 85, which was much better than before the operation. Five hours later on the same day, the patient suddenly became cyanosed, gasped for breath, had severe pain in the chest and was in desperate agony. She died two and a half hours later and there is very little doubt that the cause was a pulmonary embolism, though no necropsy was permitted.

This is the only patient in this consecutive series of 100 cases operated on in St. Louis to die in the hospital. We feel that the unhappy accident was wholly unpreventable and not directly a result of the operation.

CASE 4.—Mrs. G. C., a widow, aged 40.

Genito-urinary: The urine burns at times, is voided at day intervals of one to two hours, and once or twice at night. She has incontinence sometimes when walking. The menstrual flow is regular every four weeks, lasting one week, is profuse with clots and occasions very little pain.

Marital: Married twenty-one years, has two children, living and well, and had one miscarriage.

History of present illness began three years ago with a dull aching pain in the right side, frequent urination and a sense of pressure more recently. For three years she has suffered with backache which is worse at night, and she has noticed an increase in the size of the abdomen. She had a bloody discharge a few months ago but none since. Leucorrhea has been very slight for the past few years.

Objective symptoms: Her appearance is fair, temperature 99, pulse 112, respirations 20. The heart and lungs are normal. Blood-pressure 125, hemoglobin 95 per cent. and clotting time six minutes. The abdomen is distended by a visible new mass low in the midline. The entire abdomen below the umbilicus is dull.

Vaginal examination: The perineum is torn and the pelvic floor is relaxed. The uterus is in a tumor which consists of several hard spherical masses the size of a large orange, one in front of and one behind the cervix. The adnexa cannot be felt.

Provisional diagnosis: Uterine fibromyoma.

Operation and findings: Through a low midline incision, we did a supravaginal amputation for a uterine fibroid nearly as large as the patient's head, which was so grown into the broad ligaments that its removal was extremely difficult. The tubes were both surrounded by filmy, old fibrous adhesions, as was the appendix, a portion of the tumor and some small intestines. The tubes were thickened and stiff, hence were removed. The appendix, which was long, thick, stiff and full of stones, was removed.

Macroscopic diagnosis: Uterine fibroid, appendicitis, salpingitis.

The postoperative course was very stormy. On the third postoperative day the temperature went to 104, the white blood count was only 12,000 and the urine examination was negative. The temperature remained around 104, dropped to 99 or less only to rise again, and the patient's condition suggested typhoid fever or malaria, but examinations for both organisms failed to reveal any signs of the same. Blood smears were made and cultures were taken for typhoid bacteria without any results. The temperature for three weeks ran from 98 to 104, very irregular, then pus was discharged from the rectum, followed by bloody urina-

tion for two days and finally a purulent discharge from the vagina. The temperature soon dropped and the patient has been well ever since. There was still a slight discharge from the vagina.

The patient left the hospital four weeks after operation in good health and spirits.

"Watchful waiting" seems to have been the best policy in this case.

CASE 5.—Mrs. M. J., housewife, aged 38.

Present complaint: Pain in right side and back.

Genito-urinary: There is burning on urination, which was slightly increased in frequency. She voids four to five times during the day and once or twice at night. The menstrual periods are regular every four weeks with scanty flow lasting one day and causing pain. There has been leucorrhea off and on in small quantities for twenty years.

History of present illness began four and a half years ago with urinary frequency and burning. Was up and down under treatment several months. Then she was improved by an operation for an abscess between the uterus and rectum. Pain soon began low in the right side and back, continuing practically ever since. This pain is cramplike, coming on about every three weeks and lasting twenty-four hours.

Objective symptoms: Appearance good. Height 5 feet 9 inches. Weight 161½ pounds. Temperature, pulse and respiration normal. Heart and lungs normal. Blood-pressure 114, hemoglobin 90 per cent., clotting in three and a half minutes. The urine contains albumin and pus. The abdomen is distended. Respiratory inhibition positive, Melzer's sign positive. Upper and lower abdomen tender; the gallbladder region is suspicious.

Vaginal examination: The cervix is large, short, and very hard. The uterus lies in its axis, is large, very hard and too tender to determine whether or not it is mobile. The right adnexa lies low back, is the size of a lemon, boggy, very tender and immobile. The left adnexa cannot be felt. The rectal examination confirms the above findings.

Provisional diagnosis: Right salpingitis, appendicitis, chronic metritis, gallstone disease?

Operation and findings: Through a low midline incision, we found adhesions to the gallbladder, but nothing else there. The appendix was long, of varying caliber, showed a few tiny concretions and was removed. The pelvis was filled out by an enormous pus tube which was extremely thick and old and, although the most extreme care was maintained, a longitudinal tear in the sigmoid occurred when the tumor was separated from the viscus. After this had been closed in two layers, tabs of fat, adhesions and the right broad ligament were made to reinforce the suture line in two more layers. Two soft rubber drains were left in the pelvis and one under the skin, after a loop of the upper sigmoid had been drawn outside the abdomen through a buttonhole incision and a uterine sound thrust through its mesentery. The patient's pulse was 100; respirations 26 at the close of the operation.

Macroscopic diagnosis: Salpingitis, appendicitis.

Postoperative course: Two days after operation the sigmoid was opened and all the feces diverted from the damaged bowel.

On the sixteenth day the sound was withdrawn and a few days later the bowels were moving normally, the loop of sigmoid having almost retracted into the abdomen.

She went home on the thirtieth day, reporting a fortnight later that she was in satisfactory condition.

Everything healed here by first intention because feces were temporarily kept from passing through the damaged bowel.

CASE 6.—Mrs. M. A., housewife, aged 26.

Present complaint: Pain in upper abdomen after eating.

Personal history: She is nervous, but has gained 20 pounds in the last two years.

Gastro-intestinal: She eats regularly and slowly. Her appetite is poor and she has had attacks of pyrosis for twelve years. She belches sour gas about two hours after eating, is relieved thereby and is troubled with regurgitation of bitter acid. She has pain in the stomach and bowels two hours after eating, which begins and passes off gradually and is relieved by heat and sometimes by food. She is nauseated but does not vomit. The stools are normal.

History of present illness began twelve years ago with severe indigestion in well-marked periods, lasting two weeks with free intervals varying from six months to two years in length. No attacks for the past two years.

Objective symptoms: Appearance good. Weight 116 pounds. Temperature 99, pulse 82, respirations 18. Heart and lungs normal. Blood-pressures, systolic 120, diastolic 78. Hemoglobin 85 per cent., clotting time five minutes. Urine normal. The abdominal examination was negative except for hypertonic muscles and a splashing sound in the stomach.

Provisional diagnosis: Gastric ulcer.

Recommended operation.

Operation and findings: Through a high midline incision, slightly to the left, we found the ulcer well to the left on the minor curvature, the crater being the size of a nickel and the wall infiltrated a short distance around it. There was a narrowing of the stomach at this point, as shown by the Roentgen ray, about the size of the operator's thumb. A transverse resection was made and an end-to-end suture with reestablishment of an approximately normal lumen. The closure was made in layers.

The postoperative course was uneventful; gastric lavage was continued only five days after operation and the wound healed by first intention. She was discharged on the twentieth day, having had no pain or distress of any kind, and the blood and urine examinations showed normal conditions on dismissal from the hospital.

This patient's weight and resistance had been increased by two years' preliminary care before the serious operation was undertaken.

CASE 7.—Miss E. S., school girl, aged 13.

Present complaint: Pain in the abdomen and constipation.

Personal health: Poor until the past two years.

Gastro-intestinal: Negative except for gas; bowels normal under treatment.

History of present illness began when she was 3 months old, constipation being the first symptom. Cathartics failed to work and she lost much flesh. She gained at twelve to twenty months, but always had a distended abdomen. Enemata were always necessary to move the bowels, she was not well enough to attend school and was sick in bed almost every week till two years ago when she went to Drs. Soper and Mills. She has had no attacks since taking the prescribed diet, oil at night and colonic flushings.

Objective symptoms: Appearance good. Weight 78 pounds. Temperature 99, pulse 72, respiration 20.

Heart: No murmurs or dilatation. Marked inspiratory arrhythmia. Lungs normal. Blood-pressure, systolic 95, diastolic 60; hemoglobin 85 per cent., clotting in 6 minutes. Urine normal.

The lower chest and upper abdomen are markedly distended with a low tympanitic note everywhere over the midupper and entire left abdomen. The skin is



normal with little fat and flaccid musculature. The liver is small and high, the kidneys cannot be felt and the Roentgen ray shows an enormous descending colon.

Provisional diagnosis: Partial Hirschsprung's disease.

Recommended resection of the colon.

Operation and findings: Through a low, long incision 1 inch to the left of the midline, we found the descending colon distended into an enormous bag something like 6 inches in diameter, and coiled up. About 18 inches were resected leaving a little of the flare at both ends and an end-to-end union with two rows of sutures was made, the abdomen being then closed in layers.

Macroscopic diagnosis: Partial Hirschsprung's disease.

The postoperative course was very uneventful, the wound healing by first intention. The patient was not sick at all and apparently there was no operative shock. Her bowels moved with the aid of enemata and at times without. She had no pain anywhere and no distress at all after eating. She left the hospital nineteen days after the operation in good condition.

One month later she had gained 5 pounds and two months later the bowels were moving normally.

This girl's life was undoubtedly saved by two years' preliminary treatment at the hands of Drs. Soper and Mills. She had been rendered a good surgical risk when I got her.

CASE 8.—Mr. J. J. M., laborer, aged 75.

Present complaint: Inability to pass water.

History of present illness began about six months ago. Since that time there has been trouble in passing the urine; still he could do it until three weeks ago when catheterization became necessary and has been ever since. Until the last few days it had to be drawn every three or four hours; since that time much more frequently, as great pain is caused by any accumulation. He has been wearing a catheter for the past few days with relief.

Objective symptoms: The urine is smoky, alkaline and contains albumin, pus, blood, bacteria, a few casts and triple phosphates.

The lower abdomen is tense and extremely tender. The rectal examination shows the right lobe of the prostate to be enormous in size, smooth, spherical and elastic. It comes down almost to the anal outlet and the investigator's finger cannot reach beyond it.

Provisional diagnosis: Prostatic hypertrophy.

Recommended cystotomy; later prostatectomy.

Operations and findings: Through a low midline incision made under 0.5 per cent. novocain infiltration anesthesia, we were unable to reach the bladder. We then tried unsuccessfully to introduce a sound; later resorted to ether and opened the bladder, leaving two tubes in it, two rubber drains in the fat and an iodoform pack. He showed immediate and continuous improvement.

Operation: Six weeks later under ether anesthesia, we enlarged the fistula in the midline up and down until two fingers could be easily introduced down to the prostate. The tip of the index finger was inserted into the urethra, out of which it broke through laterally into the prostatic capsule. The two lateral lobes were very quickly shelled out, the left being the size of the smallest hen's egg, and the right about two thirds this size. The peritoneal cavity may have been opened in the upper incision. The bladder wall was carefully closed with catgut over the defect. A rubber tube was placed in the bladder, and a gloved finger in the tissue above.

Macroscopic diagnosis: Prostatic hypertrophy.

Postoperative course: There was no shock; he improved rapidly and began to pass urine by the urethra in two weeks, when the tubes were withdrawn from the bladder. In eight weeks all his urine came through the urethra, a very tiny fistula persisting above.

This man's life was saved by prolonged drainage of his bladder before prostatectomy.

CASE 9.—Mr. F. W., retired farmer, aged 83.

Present complaint: Strangulated inguinal hernia on the left side.

Cardiorespiratory: He has a cough and shortness of breath.

History of present illness began with sudden pain in the left inguinal region. He was in good health, but has had a hernia for the past twenty-five years, which has always been reducible. The pain was first noticed one day ago when his doctor was called but could not reduce the hernia. It was poulticed until he entered the hospital just now. No medicine was given to relieve the pain.

Objective symptoms: Height 5 feet 10 inches, weight 152 pounds. Temperature 98, pulse 80, respirations 18. The heart is weak but regular, the lungs have roughened sounds all over. Blood-pressure, systolic 105, diastolic 80, clotting time three minutes. The urine contains albumin and finely granular casts. There is an irreducible hernia the size of a man's fist in the left inguinal region.

Provisional diagnosis: Irreducible indirect, left inguinal hernia.

Recommend herniotomy immediately.

Operation and findings: Under 0.5 per cent. novocain infiltration anesthesia, we made an oblique incision and found that both the external aponeurotic ring as well as a thickened peritoneal ring had to be divided before a loop of small intestine could be returned to the abdomen. The sac was full of liquid blood and the strangulated loop was dark red in color; it rapidly improved as soon as the constriction was relieved, hence it was returned to the abdomen and the layers overlapped with silk. A complete closure was made.

Macroscopic diagnosis: Strangulated hernia.

Postoperative course: The patient was up the second day in a wheel chair, on the lawn on the third day and thereafter. The convalescence was uneventful excepting a subacute skin infection in the site of the operative wound which broke down seven days after the operation. It was treated with glycerin packs and discharged some pus. Two weeks after the operation the discharge practically ceased and the wound healed rapidly with the general condition slowly improving. The patient was apparently not disturbed by the operation and went home well two weeks later.

This case illustrates the value of maintaining the routine of an old man's normal existence as well as the value of a local anesthetic in gut obstruction and advanced age.

CASE 10.—Mrs. L. H., housewife, aged 28.

Present complaint: Fecal fistula.

Gastro-intestinal: The appetite is good but she is troubled with belching, vomiting and loose bowels. She was jaundiced when a child.

History of present illness began one year ago with postpartum hemorrhage and subsequent rises of temperature, a tube and ovary being removed two weeks later. The patient recovered, became pregnant again and had advanced to the fifth month when she was taken with severe abdominal pains and a diagnosis of intestinal obstruction was made. An operation on

the following day revealed congested bowels with some suspicious places. The bands were cut, but the patient collapsed and, as the bowel showed some returning color, the abdomen was closed without a resection. Several days later a fecal fistula formed and nine days after the first operation, a second was done. The discolored bowel had sloughed and was contained in a well walled-off cavity. The two ends of the bowel were brought together. A few days later the wound began to drain again and one month after the second operation a third was done, uniting a loop of small bowel to the ascending colon. This was done through a new incision, and the wound healed by first intention, but a fecal discharge has continued up to the present time.

All the above occurred before we saw her.

Objective symptoms: The patient looks sick. Height 5 feet 8 inches, weight 97½ pounds. Temperature 100, pulse 124, respirations 24. Blood pressure 125, hemoglobin 80 per cent., clotting time five minutes. The urine contains albumin and casts.

Operation and findings: Through a long incision in the left rectus muscle, we did a lateral anastomosis between a very large and a very small coil of small intestine hoping thus to sidetrack the small obstructing fistula. The wall was closed in layers and the operation extremely well borne.

Macroscopic diagnosis: Intestinal fistula.

We accomplished nothing by the above procedure, having apparently selected two coils of gut above the lesion.

Two weeks later another attempt was made to cure her.

Operation and findings: Through the old long scar to the right of the midline, we encircled the fistula, isolated the mass of adherent bowel about it and, after separating the coils, found the ileum completely divided, ending blind within 6 inches of the ileocecal valve. The appendix was removed because it was fibrous and adherent. A few centimeters of small intestine were resected to find healthy tissue. Closure, excepting the skin, was made en masse with catgut, two soft drains and two silkworm stay sutures being used.

Macroscopic diagnosis: Intestinal fistula, appendicitis.

The above procedure reads simple enough, but it was a most complicated and difficult one.

Postoperative course: On admittance to the hospital the patient had been getting one-half grain of morphin, hypodermically, five times a day, and we were obliged to give her almost the same amount until after the operation, when the amount was gradually decreased until the fourth day, since which time she has not received any.

The patient was discharged from the hospital thirty days after the operation. She was on regular diet, had no pain, the skin around the incision was in splendid condition and the patient said she never felt better in her life.

This case needs no comment.

CASE 11.—Mr. E. C., solicitor, aged 56.

Present complaint: Painful, uneasy feeling in the epigastrium.

Gastrointestinal: The appetite is good, but he has much belching immediately after eating and is relieved thereby. He has a bitter acid regurgitation sometimes. The discomfort in the upper midabdomen one-half hour after eating begins and passes off gradually, is relieved by food for one-half hour and

radiates across the abdomen. There is no nausea or vomiting. He has piles, the bowels are constipated and an aperient has been used for four years.

History of present illness began twelve to fourteen years ago with pain in the right abdomen, almost continuously since. He was operated on thirty-two years ago for left inguinal hernia which recurred eight years later. His nose was operated on fifteen years ago for broken septum. The abdominal trouble was diagnosed "liver complaint". For the past three months, the patient has had a heavy feeling in the epigastrium which would develop into actual pain, dull aching in character, and localized in an area 2 inches in diameter above, and just to the right of the umbilicus. The uneasy feeling developed about two or three hours after meals and continued until patient ate again. This condition is getting worse and he has lost 14 pounds in the last ten weeks. He has a good appetite but for the past two months he has not eaten any meat or heavy greasy foods. He always prefers sour foods.

Objective symptoms: His appearance is fair; height 5 feet 3 inches; weight 134 pounds.

Blood pressure: Systolic 103, diastolic 66; hemoglobin 90 per cent., clotting time two minutes; the urine is normal; white blood count 8,000; red blood count, 4,800,000; differential count: Polymorphonuclears 72 per cent.; mononuclears 28 per cent.

Stomach contents: Three hundred c.c. of an Ewald test meal recovered at the end of one hour. It was watery and contained no mucus, blood or lactic acid. The total acidity was 75 per cent.

The feces were soft, very dark and contained no mucus, pus, parasites, ova or muscle cells. The guaiac test for blood was negative, but Schmidt's test was positive.

He has a dilated stomach with very marked rectus muscle spasm over the region of the pylorus and the whole epigastrium. No distinct tumors can be palpated. There is a positive Melzer's sign, a marked sigmoid spasm, a left inguinal hernia and hemorrhoids.

Provisional diagnosis: Chronic appendicitis; beginning malignancy of a stomach tumor from an old ulcer causing pyloric obstruction. Hemorrhoids; left inguinal hernia.

Recommended appendectomy and gastrectomy.

Operation and findings: Through a high midline incision, we found an adhesion between the gallbladder and the duodenum reaching over onto the colon. In the greater curvature, 2 to 3 cm. from the pylorus, there was a thickened area with a crater-like center about the size of a quarter. This showed a greatly thickened lesser omentum surrounding it, and shining tubercle-like nodules just under the peritoneum near by. A resection was done, the end of the stomach being sewn in the side of the upper jejunum. A drain was left in the upper angle and closure was made in layers with a skin drain.

Macroscopic diagnosis: Gastric ulcer, probably malignant.

Microscopic diagnosis: Simple ulcer.

Postoperative course: On the night of the operation the patient began to vomit, but was much better on the second day and after the third day had no nausea or vomiting.

Two weeks after operation the wound was almost healed and the patient felt so well that he consented to the repair of the hernia.

Operation: Under 0.5 per cent. novocain and adrenalin infiltration anesthesia we made an oblique incision and found scars matting all the layers together and excised the veins. There was a direct opening into the abdomen through which three fingers could be introduced and an extremely thin conjoined tendon, hence the rectus muscle was transplanted with the



anterior sheath and the aponeurosis to Poupart's ligament and a broad overlap was made.

Macroscopic diagnosis: Left direct inguinal hernia.

Postoperative course: Two days later the patient complained of pain in the chest and coughs a great deal. The sleep is very much disturbed and a central pneumonia being suspected.

Five days later the leg is swollen and painful along the internal saphenous vein.

Nineteen days later the phlebitis is about well, leg elevation and bed rest having cured this complication.

Three weeks later the patient is up and around without cough or pain of any kind.

Twenty-seven days later the patient was discharged with all wounds healed by first intention. A few weeks later he reported as feeling good and eating everything. He says he "never felt better in his life" and he walks ten minutes with very little swelling of the lower leg. He has no more hernia and wears no truss.

This recovery demonstrates that careful after-treatment and expert nursing will carry a patient through many dangerous complications.

CASE 12.—Mrs. E. O., housewife, aged 49.

Present complaint: Lump in the left groin.

History of present illness began ten to twelve years ago when she strained herself while hanging out clothes. She felt a tiny protrusion which remained stationary for two years then gradually grew to its present size. There is always so much feeling of "strain" that she must sit down to relieve it, which interferes with her duties.

Objective symptoms: Her appearance is fair, height 5 feet 7 inches, weight 135 pounds. Heart and lungs are normal. Blood pressure, systolic 115, diastolic 78. Hemoglobin 85 per cent., and clotting time is four minutes. The urine is negative except for a very faint trace of albumin.

The abdominal examination is negative except for a subcutaneous mass in the left groin the size of a small coconut. It can be replaced in the abdomen, leaving a ring which admits two fingers with the epigastric artery to the outside.

Provisional diagnosis: Direct inguinal hernia.

Operation: Through an oblique incision we discovered a long sac coming out from under the edge of the internal oblique muscle at the inner side of the great vessels with no evidence at all of Poupart's ligament being present. Two mattresses silk sutures carried the heavy internal and external oblique aponeurosis down to Cooper's fascia and Gimbernat's ligament. Across the vessels running to the outer side, one mattress silk suture carried the same structures down to where Poupart's ligament should be, they being tied outside the aponeurosis. The latter was then imbricated with silk, the fat and skin being closed separately.

Macroscopic diagnosis: Left femoral hernia with atrophy of Poupart's ligament.

The postoperative course was uneventful, the wound healing by first intention and there being no pain or discomfort for the first seven days.

One week after operation the patient suddenly developed a sharp pain in the right side and five hours after the onset the muscles were very rigid and she had all the evidence of a severe attack of appendicitis. Nothing afforded relief during this attack save morphin and immediate operation was determined on.

Operation: Through a McBurney incision enlarged over the rectus, we found and removed an appendix which was long, thick, rigid, completely adherent and gangrenous for a distance of 2 cm. close to the base, and perforated over a fecal stone the size of a pea.

A strip of rubber was tied to the stump, all the layers being loosely and partially sewed up to it.

The operation was performed under 0.5 per cent. novocain infiltration anesthesia, 3 fluid ounces of the solution being used, supplemented with a very few whiffs of ether while the appendix was being sought.

Macroscopic diagnosis: Acute gangrenous appendicitis.

The postoperative course was uneventful, except on the eighth day after operation, when she developed a severe pain in the base of the left lung where many râles were heard. The chest and wound were strapped, the patient given fresh air in abundance and creosote carbonate. In three days all the râles had gone, but the pain being still present, the chest was restrapped with adhesive which stopped all pain. The temperature came down at once and the patient has been well ever since. This evidently was postoperative pneumonia.

The patient was discharged five weeks after the first operation.

It is surely a rare after-treatment which has an emergency appendectomy and acute pneumonia as a part of it.

CASE 13.—Mrs. S. C., housewife, aged 58.

Present complaint: Constant bloody vaginal discharge.

History of present illness began five years ago with frequent urination, which has become less frequent during the past two years. A bloody vaginal discharge was noted one and a half years ago, which, during the past six months has been constant, bright red in color, profuse and contained some clots. She has had sharp shooting pains in the lower abdomen for the past five months.

Objective symptoms: Appearance is fair; height five feet 3 inches, weight 151 pounds, temperature 98, pulse 68 and intermittent, respirations 24. The heart and lungs are normal. Sclerosis is marked in the radial arteries. Blood pressure, systolic 225, diastolic 110, hemoglobin 85 per cent., clotting time is five minutes. The urine shows a faint trace of albumin and a few coarsely granular casts.

Pelvic examination: She has a cystocele; the cervix is destroyed and its site is represented by a defect the size of a half dollar and the indurated crater edges run onto the anterior vaginal wall farther than onto the posterior wall. There is a purulent bloody discharge.

Provisional diagnosis: Cancer of the uterine cervix (inoperable).

Recommended cautery treatment.

Operation: Through a low midline incision, we ligated as much of the broad ligament as possible, en masse on both sides, then the Percy cautery was used until the masses surrounding the cervix were soft and the hand in the abdomen could no longer bear the heat which had been applied for thirty minutes. Complete closure of the abdominal wound was made in layers.

Macroscopic diagnosis: Carcinoma of the uterus.

Postoperative course: This was uneventful until the patient got up of her own accord nine days after the operation and the abdominal wound opened completely so that a second operation was necessary to keep the intestines within the abdomen.

Operation: The patient was unmanageable so was given ether to close the abdominal opening which was sutured with deep and superficial silkworm gut. There was considerable shrinkage or atrophy of the left rectus making closure extremely difficult.

On the following day the patient was in good condition, but very childish and almost unmanageable,

complaining of burning in the stomach and esophagus after meals which was relieved to some extent by sodium bicarbonate. The blood pressure was, systolic 185, diastolic 100; 40,000 c.c. of water was given under the skin in three days following the second operation.

On the fourth day the blood pressure was systolic 160, diastolic 90; she voided large quantities of urine 2,100 c.c. being voided during the night. The more water was put in and the lower the blood pressure gets the more urine is excreted.

On the eleventh day the blood pressure was systolic 138, diastolic 75, with the patient feeling good. She was on general diet, the abdominal wound was about healed and she voided from 53 to 60 ounces of urine in twenty-four hours, casts being still present.

The patient went home one month after the original operation; she looked and felt fine and has very little vaginal discharge which was not offensive.

I have never seen a patient die following rupture of a laparotomy suture line. I have resutured a few without an anesthetic.

CASE 14.—Mr. J. L., aged 43, tuck-pointer.

Present complaint: "Both legs and ribs broken."

History of present illness began thirteen days ago while at work 40 feet in the air when a scaffold broke causing patient to be precipitated to the ground, falling on his feet. In a moment, the mortar bucket struck him on the chest, it having fallen the same distance; the patient was not rendered unconscious and was taken at once to the city hospital. Three Roentgen-ray pictures were taken which showed both legs broken below the knee. Wound dressed and each leg put in a "wooden chest" and left there four days. Plaster casts were then put on both legs, extending midway on to the thigh. Adhesive straps put on the chest on the second day after admittance to the hospital. Nine days later the patient was apparently getting along well; the casts were removed, each leg incised and drained over the broken regions and the casts replaced the bones at this time having been set. No anesthetic was given. The patient was in severe pain following the operation and was given medicine to make him sleep, since which time he has not been conscious. He was brought to St. Anthony's Hospital on the thirteenth day of illness.

Objective symptoms: Appearance bad; height 5 feet 8 inches; weight 190 pounds; temperature 104; pulse 130; Cheyne-Stokes respirations; heart normal.

Lungs: Râles in front and right base.

Blood pressure: Systolic 125, diastolic 90, hemoglobin 80, clotting time three minutes.

Urine shows heavy trace of albumin and a few coarsely granular casts.

The patient is comatose and has incontinence of feces and urine. He has a variable blood pressure; the lips are cyanotic; the skin is moist and sallow; the finger tips are blue and circulation very sluggish. There is also a papular dermatitis on the front of the chest and the skin shows bluish discolorations. No crepitation can be found over any rib. The left lower leg is edematous just above the ankle wound with a drain protruding; it looks good and is draining well. The right lower leg is similar to the left, except that the incised wound is longer (8 inches) and there is some discoloration around the same which is draining freely. The cast was too tight just above the wound on the right leg, causing the limb to be swollen just above the incision, and the skin is very blue, due to pressure. No evidence of gas bacillus infection. Four days after admittance, the patient showed signs of consciousness and talked rationally. Cheyne-Stokes respirations stopped. During the first three days, the patient was given 6,100 c.c. water (hypodermoclysis).

On the fifth day, the temperature was 99.5, a steady fall from 104, on admittance. The pulse was 90 and the respiration was 34. There were a few râles at the bases of the lungs at the back. The heart was very good; no stimulation was given since the second day of the hospital stay. The patient was irrational; the wounds were more swollen and the left drain came out. On the eighth day, a Roentgen-ray of both legs showed compound comminuted fractures of both bones of each leg, and the left showed, in addition, a Pott's fracture. A probable gas bacillus infection in the right leg necessitated immediate amputation. The hemoglobin was down to 65 per cent.

Operation: Through a circular skin incision after forcible retraction, we made a circular amputation between the middle and lower third of the right thigh. The muscles were approximated by a purse-string suture and the skin united transversely. An infiltrated area on the anterior surface of the thigh was incised and a soft rubber drain inserted.

Postoperative course: Three thousand nine hundred c.c. of water was given by hypodermoclysis in the first twelve hours after operation. He recovered nicely and the hemoglobin soon began to improve.

Operation: Ten days later, under novocain infiltration anesthesia, we drilled and drove a pin 6 inches long through the left os calcis.

The left leg was put up in extension, starting with 5-pound pull on the pin.

Twenty days later the patient continued to improve, the stump healing rapidly with very little discharge. The left foot carried 16 pounds, the hemoglobin was 85 per cent. and the blood pressure was systolic 130, diastolic 85.

On the twenty-fourth day the weight was increased to 19 pounds. No pain.

On the thirty-fourth day with the patient carrying 35 pounds, a plaster cast was put on the limb well above the knee and the weight left on for several hours. The appearance of the leg was perfect.

On the following day the pin through the os calcis was removed without pain.

Forty-six days after operation the patient went home with the stump healed, the left leg in a cast, the blood pressure systolic 130, diastolic 85, the hemoglobin 90 per cent., and the heart, lungs and kidneys normal.

This result illustrates what can be done with a wreck of a man by painstaking care for detail. It was startling to watch the progressive destruction of hemoglobin as long as the infected right leg remained on and no less so to note the rapid rise of it after the amputation.

CASE 15.—Mr. H. S., salesman, aged 54.

Present complaint: Painful lump on lower left jaw.

History of present illness began six weeks ago with pain in the lower left jaw. He thought it came from a tooth which he had pulled but the trouble persisted. He found a lump four weeks ago which has remained the same size.

Objective symptoms: Appearance good, height 5 feet 8½ inches, weight 203 pounds. The temperature, respirations and pulse are normal. Heart and lungs normal. Blood pressure, systolic 115, diastolic 75, hemoglobin 85 per cent., and clotting time four and a half minutes.

The gum at the site of the bicuspid on the lower left jaw is the seat of a sloughing tumor the size of a small pecan, extending toward the floor of the mouth. No gland or other extension is palpable.

Provisional diagnosis: Cancer of the lower jaw.

Recommended resection.



Operation: Through a Kocher incision down the middle of the chin and well under the jawbone, we removed in one piece the lymphatics of the superior cervical triangles, the submaxillary gland and the left half of the inferior maxilla as far back as the angle. The mouth was entirely closed and the defect packed with iodoform gauze, down to which platysma and skin were sutured and the teeth wired together.

Postoperative course: The patient was discharged two weeks after the operation, the chin wound having healed by first intention except a small drainage wound in the neck.

Two days after leaving the hospital, the patient had a profuse hemorrhage from an area of the wound inside, lost about 1 quart of blood and was brought to the hospital in a weakened condition. The blood pressure was systolic 127, diastolic 60 and the hemoglobin was 85 per cent.

Four days after readmittance he had another hemorrhage from inside the external wound, lost about 400 to 500 c.c. of blood and the blood pressure dropped to systolic 85, diastolic 60. He had another profuse hemorrhage on the following day and the blood pressure was systolic 80, diastolic 55.

Operation: Under 0.5 per cent. novocain infiltration anesthesia, the common carotid artery was ligated and after complete closure of this wound, we freely split the original flap upward and packed the defect with iodoform gauze.

Two weeks later the blood pressure was systolic 115, diastolic 75 and the hemoglobin was 75 per cent. The sensory or motor functions were not disturbed by the operation and the patient felt as well as he ever did in his life. The red blood count was 4,544,000 and the white blood count was 6,400.

Secondary hemorrhage from such a neck wound has been almost uniformly fatal, hence my satisfaction in recording a form of treatment which saved this patient.

CASE 16.—Miss E. K., aged 18.

Present complaint: Pain in the abdomen.

Gastro-intestinal: The appetite is good. Has had colics which were relieved by eating. The bowels are normal.

History of present illness began two months ago with sharp shooting pains in the epigastrium on the right side; more severe before meals and relieved by eating. The pain grew steadily worse. Two days ago the patient fell down a 6-foot stairway, got up and went about her housework. The next evening she had severe cramps similar to the previous attacks in the epigastrium. She went to bed and called a doctor who gave morphin without relief. On the following day another doctor was called who sent her to the hospital immediately. The pain and abdominal tension had steadily increased since the onset of the attack.

Objective symptoms: Appearance is very bad; height 5 feet 3 inches, weight 160 pounds; temperature 102; pulse 140; respirations 27. The heart is normal; a few râles are heard in the lungs.

The abdomen is tense and the patient is in severe pain but not comatose although she is cyanotic.

Provisional diagnosis: Ruptured duodenal ulcer.

Recommended immediate operation.

Operation: Through a high incision to the right of the midline, we found a perforation the size of a slate pencil on the anterior surface of the duodenum about 2 cm. below the pylorus; a piece of vegetable was just emerging. The peritoneal cavity was full of gas and there was a large amount of seropurulent fluid under the liver and to the right of the ascending colon. The duodenum was closed with a silk purse string in which a fat tab was ligated. A soft rubber

drain was placed above and to the outer side. The rest of the wound was closed with through-and-through silkworm sutures.

Macroscopic diagnosis: Perforating duodenal ulcer.

Postoperative course: She improved rapidly for a few days, did not vomit, was soon able to take fluids and did well for ten days. Then in the right chest, symptoms of a febrile character began which led us eighteen days later to explore the pleura. With 0.5 per cent. novocain infiltration anesthesia we withdrew 25 c.c. of a clear greenish-yellow serous fluid.

Diagnosis: Pleuritis with effusion.

From this time she slowly improved and went home well thirty days after the original operation.

It is surely rare for a patient to recover when operated as late as forty-eight hours after the perforation of a duodenal ulcer into the free peritoneal cavity.

In addition to the sixteen cases reported in detail we merely mention below the rest of the one hundred which go to make up this series.

A summary of the literature on this subject shows the trend of opinion concerning the various factors of safety.

William Mayo, Porter and Parham emphasize the importance of careful preliminary examination and history taking to make a correct diagnosis and govern the choice of anesthetic. Careful laboratory examinations should always be made and Roentgen ray examinations, ureteral catheterization, etc., employed where indicated.

Porter mentions the fact of alarming postoperative symptoms, such as intermittent pulse, nausea, vomiting and headache, which inquiry revealed had been present before operation but not ascertained.

Sexton and Walker think too much attention is paid to operative technic and not enough to preliminary preparation and postoperative treatment.

Sexton gives tonics in anemic malarial patients, and in cases of long, chronic, diseased conditions gives digitalis to tone down the heart and iron, quinin and strychnin to brace up the nervous system and raise the hemoglobin. He gives large amounts of water, regulates the diet and gives calomel and soda to "fast livers" which prevents much postoperative vomiting. When a limb is to be amputated, it is elevated to conserve blood in the very young or very old patient. He never operates if the hemoglobin is under 30 per cent. In emergencies he gives morphin and enemata of hot milk, coffee and whisky to ward off shock. In collapse and hemorrhage, intravenous transfusion and hypodermoclysis are given to stimulate the heart and anemic brain and to raise the blood-pressure. He believes in repeating small amounts rather than risk pulmonary edema with large amounts. He advises raising the foot of the bed, giving strychnin and morphin, keeping the patient warm, and warns against

No.	Name	Age, Years	Diagnosis	Operation
3203	Miss L. T. ....	28	Cholecystitis .....	Cholecystectomy
3239	Mrs. L. S. ....	39	Recurrent exophthalmic goiter.....	Thyroidectomy (left lobe)
3451	Mrs. J. C. ....	50	Chronic appendicitis; uterine retrodisplacement.....	Appendectomy; Baldy shortening of the round ligament
4052	Mrs. Y. K. ....	28	Keloid of chest wall.....	Removal of tumor
4773	Mr. R. B. ....	18	Silver wire in abdominal scar.....	Removal of wire
4948	Mr. J. S. ....	23	Subacute appendicitis (recurring).....	Appendectomy
5085	Mrs. J. P. ....	45	Adenoma of thyroid.....	Enucleation
5126	Mrs. C. L. ....	48	Chronic appendicitis; postoperative hernia.....	Appendectomy; herniotomy
5435	Mr. A. M. ....	11	Hypertrophied tonsils .....	Tonsillectomy
5472	Mrs. M. K. ....	27	Hyperplastic goiter .....	Two preliminary ligations; thyroidectomy
5490	Dr. C. C. G. ....	55	Carcinoma of abdominal wall.....	Dissection of tumor
5548	Mrs. E. B. ....	42	Crural ulcer .....	Cauterization
5601	Mrs. C. H. ....	48	Exophthalmic goiter .....	Thyroidectomy
5675	Miss L. K. ....	40	Appendicitis; uterine fibromyoma.....	Appendectomy; supravaginal hysterectomy
5677	Mrs. V. O. ....	30	Salpingitis; appendicitis .....	Salpingectomy; appendectomy
5681	Mr. S. L. H. ....	19	Left inguinal hernia; hypertrophied tonsils.....	Herniotomy; tonsillectomy
5682	Miss J. C. ....	30	Acute appendicitis .....	Appendectomy
5684	Mr. E. M. ....	19	Banti's disease .....	Splenectomy
5685	Mrs. E. M. ....	33	Postoperative hernia .....	Herniotomy
5688	Mrs. F. H. ....	34	Goiter intoxication .....	Thyroidectomy
5690	Mr. H. H. ....	32	Fracture olecranon process.....	Reduction and cast
5693	Dr. F. E. T. ....	42	Septic infection of lower extremity.....	Incision and drainage
5697	Miss L. B. ....	20	Axillary adenitis .....	Dissection of glands
5698	Mrs. M. M. ....	56	Kidney tuberculosis; appendicitis.....	Nephrectomy; appendectomy
5699	Mrs. C. L. ....	56	Cystic ovary; chronic appendicitis.....	Oophorectomy; appendectomy
5700	Mr. D. D. H. ....	34	Appendicitis; cholecystitis .....	Appendectomy; cholecystotomy
5701	Mr. W. D. J. ....	37	Chronic appendicitis .....	Appendectomy
5702	Mrs. L. M. ....	37	Ischiorectal abscess .....	Drainage
5704	Miss E. W. ....	45	Simple ovarian cystic tumor.....	Oophorectomy
5706	Miss C. S. ....	41	Röntgen-ray burn of back.....	Excision of lesion
5709	Mr. G. W. ....	..	Left inguinal adenitis.....	Excision of glands
5711	Mr. W. K. ....	37	Perforative appendicitis; peritonitis.....	Appendectomy
5712	Mr. J. B. ....	55	Gallstone disease; appendicitis .....	Cholecystotomy; appendectomy
5713	Mr. E. H. ....	16	Retained testicle; inguinal hernia; hypertrophied tonsils .....	Replacement of testicle; herniotomy; tonsillectomy
5719	Mrs. R. B. ....	73	Prolapse of vagina; rectocele; vesicocele.....	Fixation of the uterus; perineorrhaphy
5721	Mrs. Z. W. ....	26	Pregnancy .....	Exploration
5726	Mrs. D. M. ....	38	Eversion of cervix; cervical polyp; relaxed perineum....	Amputation portion of cervix; perineorrhaphy
5731	Mrs. L. S. ....	43	Medullary carcinoma of breast.....	Breast amputation
5732	Mrs. J. T. ....	31	Appendicitis complicated by pregnancy.....	Appendectomy
5733	Mr. M. J. C. ....	72	Chronic appendicitis .....	Appendectomy
5735	Mrs. M. M. ....	28	Appendicitis, chronic metritis; relaxed perineum.....	Appendectomy; supravaginal hysterectomy; perineorrhaphy
5739	Mrs. R. K. ....	21	Chronic appendicitis .....	Appendectomy
5740	Mrs. E. F. ....	61	Diverticulum of oesophagus and pharynx.....	Invagination of pouch
5742	Mrs. M. S. ....	25	Metritis; ovarian cyst.....	Supravaginal hysterectomy; oophorectomy
5744	Mrs. A. B. ....	31	Chronic appendicitis; uterine retrodisplacement; relaxed perineum .....	Appendectomy; Baldy shortening of the round ligaments; perineorrhaphy
5748	Mrs. R. W. ....	38	Toxic goiter .....	Thyroidectomy
5751	Mrs. B. F. ....	30	Double salpingitis; metritis; appendicitis.....	Salpingo-oophorectomy; supravaginal hysterectomy; appendectomy
5752	Mrs. M. F. ....	30	Ovarian cystic tumor; salpingitis.....	Salpingo-oophorectomy
5753	Mr. J. K. ....	64	Oblique inguinal hernia.....	Herniotomy
5754	Mr. G. G. ....	41	Chronic appendicitis; cholecystitis.....	Appendectomy; cholecystotomy
5757	Miss D. D. ....	20	Ulnar nerve in callus.....	Liberation of ulnar nerve
5764	Miss R. P. ....	30	Chronic appendicitis; hemorrhoids.....	Appendectomy; clamp and cautery operation
5766	Miss C. A. ....	36	Granulations in scar.....	Skin grafting
5767	Mrs. M. W. ....	66	Cholecystitis; pericholecystitis .....	Cholecystectomy
5773	Mrs. J. T. ....	..	Ovarian tumor with twisted pedicle; appendicitis.....	Oophorectomy; appendectomy
5778	Mrs. E. H. ....	28	Pregnancy with marginal separation.....	Supravaginal hysterectomy
5781	Mrs. R. C. ....	28	Cyst of thyroid.....	Thyroidectomy
5783	Mr. T. C. ....	36	Hemorrhoids .....	Clamp and cautery
5784	Mr. L. B. ....	55	Gallstone disease; appendicitis.....	Cholecystectomy; appendectomy
5785	Mrs. M. P. ....	36	Ovarian dermoid cyst.....	Oophorectomy
5788	Mrs. M. S. ....	22	Complete uterine prolapse.....	Vaginal hysterectomy
5789	Mr. E. J. J. ....	75	Pyloric tumor and obstruction.....	Anterior gastroenterostomy with Murphy button
5790	Mr. J. C. ....	26	Appendicitis; duodenal ulcer.....	Appendectomy; posterior gastroenterostomy
5791	Mr. J. W. ....	42	Hemorrhoids; anal prolapse.....	Clamp and cautery
5794	Mrs. E. S. ....	24	Chronic appendicitis .....	Appendectomy
5795	Mr. F. B. ....	47	Chronic appendicitis .....	Appendectomy
5798	Mr. J. S. ....	48	Kidney tumor, abdominal metastases.....	Exploratory laparotomy
5799	Mr. O. H. ....	29	Duodenal ulcer; appendicitis.....	Post. gastroenterostomy; appendectomy
5805	Miss N. S. ....	28	Empyema of chest.....	Drainage
5808	Mrs. D. C. ....	29	Chronic metritis; salpingitis; oophoritis; appendicitis....	Hysterectomy; appendectomy
5812	Mr. E. S. ....	37	Jejunal ulcer; appendicitis.....	Excision of ulcer; gastroenterostomy; appendectomy
5814	Mr. M. W. ....	27	Fibro-adenoma of breast.....	Excision of tumor
5815	Mr. P. N. ....	24	Left inguinal hernia.....	Herniotomy
5816	Mrs. E. K. ....	75	Cancer of labia majora.....	Excision with electrocautery
5820	Mrs. F. T. ....	40	Cancer of left breast.....	Breast amputation
5822	Mrs. A. H. ....	43	Exophthalmic goiter .....	Thyroidectomy
5823	Mrs. E. G. ....	22	Chronic appendicitis .....	Appendectomy
5828	Mr. G. H. ....	30	Solaceous cyst of face.....	Dissection of cyst
5830	Mr. R. B. ....	58	Fistula of jaw.....	Dissection of fistula; tooth extraction
5831	Mrs. M. S. ....	28	Appendicitis, gallstone disease.....	Appendectomy; cholecystotomy
5834	Mr. P. H. ....	52	Septic infection of face.....	Incision and drainage
5835	Mr. J. T. ....	45	Pelvic abscess .....	Drainage
5836	Miss F. S. ....	18	Appendicitis abscess .....	Appendectomy
5763	Mr. J. M. ....	47	Superficial right cervical adenitis.....	Excision of tumors



draughts. Old patients are removed from bed as soon as possible.

Walker finds much good resulting from pre-operative rest, diet and purgation. The teeth are given attention, the nasal cavities are sprayed with an antiseptic solution, alcohol baths and vigorous massage are given. The intestinal tract is kept as clean as possible by giving sterile liquids several days before operation, much sterile water, and the bowels are flushed with sterile normal salt solution the morning of operation.

He gives plenty of cold sterile water after operation, an enema on the evening of the first day, calomel on the second day and liquid diet is given after the bowels move, followed by soft diet.

Plondke gives the ordinary preoperative preparation and is very careful in the selection of the anesthetic.

Normal saline solution is administered during the operation to bad subjects and when the operation is sufficiently advanced so that a distended colon does not interfere, the patient is given a quart of normal saline solution per rectum.

For vomiting, quiet is enforced, morphin, sodium bicarbonate and lavage are given and the patient is placed in sitting position.

For distention, the rectal tube, enemata, simple, alun and asafetida, and turpentine stupes are all tried and when the obstruction persists, the abdomen is opened and the intestines drained as is the gallbladder.

He treats postoperative acidosis with lavage, sodium bicarbonate and glucose.

Hander has used antiphlogistine with good results for postoperative pain after both cystic ovaries had been removed but the symptoms continued. He also had good results in an acute attack of appendicitis and in an osteomyelitis of the femur, several large particles of bone sloughed off after several applications and the opening closed rapidly.

Levin reports a case of crushed foot where the tissues up to the tarsal bones began to slough, the heads of the metatarsals became visible, the plantar and dorsal surfaces up to about the middle had to be removed, leaving a very ugly stump with the tips of the bones uncovered. Amputation was advised, but the patient refused and was discharged well in three months after continued soaking in lysol.

Sheldon says that the duration of the anesthesia and operation is a too often neglected factor in operative mortality. It occasionally happens that a life can be saved by a palliative operation that would have been lost had a radical procedure been attempted, namely, drainage of an acute cystitis preparatory to prostatectomy, drainage of an acute cholecystitis, and enterostomy in acute intestinal obstruction.

Horsley favors ether anesthesia in all cases except hemorrhage and infection. In the treatment of infection the natural defenses of the body can be conserved by avoiding prolonged anesthesia and rough handling of the tissues. He emphasizes anoci-association to preserve natural immunity.

He says that the surgeon should be a happy medium between the operator who works for time and the one who takes his time even in desperate cases, destroying the resistance of the patient.

The chief factor of safety in malignant tumors is early diagnosis and prompt treatment. A radical operation must follow immediately after the removal of a section for microscopic diagnosis as it only takes a few hours to carry the cancer cells to other parts of the body.

Kennedy advises operation the first hour at any stage of ectopic pregnancy and perforated appendicitis, except where there has been extensive hemorrhage. He advises the removal of both tubes where one is a pus tube and the other seems healthy. Early and completed operation is his plea for all infections and hemorrhagic conditions of the abdomen.

Whiting says that any lapse from the ideal of every conscientious medical man is due to the following factors:

1. The inability to estimate accurately the resistive and recuperative powers of an individual.

2. Lack of careful study of the case. This is detrimental and unnecessary in an emergency, but necessary in an elective case to obtain a correct diagnosis.

3. Failure to recognize the curative power of Nature. This is seen in unnecessary and uncalled for operation. Nature demands assistance in all cases of malignancy, and that given early. In acute appendicitis it is difficult to say how much nature will do so we are justified in interfering. Great judgment is required in accidents and crushes.

4. Failure to weigh the contraindications. He postpones operation for hernia when a truss is efficient if the patient has albuminuria, a cold, is very obese, or suffering from bronchitis. Anemia, diseases of the heart and lungs, diabetes and hemophilia may forbid operation.

5. Failure to recognize the seriousness of every operation. Familiarity with operative procedures which comes with long experience and success breeds contempt. Every operative procedure is a serious one and should be considered so.

6. Desire to do more than is necessary. He quotes G. Brown Miller: "In difficult cases it is not an acknowledgment of want of skill but the sign of good surgical judgment not to attempt

the impossible or assume risks which are too great."

7. The desire to enter new fields.

8. Failure to put the interests of the patient first.

#### CONCLUSIONS

The following elements in the above detailed cases seem worthy to be called factors of safety:

In Case 1 we see one of the distinct indications for local anesthesia in abdominal work.

In Case 2 we have an extreme type of hyperthyroidism. After two preliminary ligations followed by hygienic treatment for several months, thyroidectomy became a safe procedure when otherwise it would be highly dangerous.

In Case 5 temporary sidetracking of feces allowed a badly damaged pelvic colon to heal without any disturbance whatever.

In Case 6 prolonged dietetic treatment so improved a patient's condition that resection of the stomach was well borne.

In Case 7 two years of colon lavage made it possible to resect a megalocolon safely.

In Case 8 drainage so improved an obstructed urinary apparatus that prostatectomy was borne like a minor operation.

In Case 9 we see another indication for local anesthesia as well as the illustration of the fact that an elderly individual must not have his life's routine interrupted for any length of time.

In Case 14 we see how a septic patient is benefited by vast quantities of water under the skin and how as much as 35 pounds traction can be exerted on an extremity by use of a special apparatus.

In Case 15 we ligated the common carotid artery on account of secondary hemorrhage in a dissection of the neck. This case will be reported elsewhere in full, hence no elaboration will be made here.

Metropolitan Building.

#### BIBLIOGRAPHY

1. Mayo: Preliminary Examination of Surgical Patients. Collected papers, vol. ii.
2. Porter: The Importance of Careful Examination and Inquiry Concerning History in All Cases Prior to Operation, *Fort Wayne Med. Jour.*, 1899, xix, 79.
3. Parham: Conservative Surgery, *Southern Med. Jour.*, 1909, ii, 543.
4. Sexton: Preoperative and Postoperative Treatment of Surgical Cases, *Jour. Am. Med. Assn.*, January, 1905.
5. Walker: Practical Points in Surgery, *Med. Rec.*, April 11, 1914.
6. Plondke: Preparatory and Postoperative Treatment, *Journal-Lancet*, December, 1913.
7. Hander: Conservative Surgery, *Southern Practitioner*, 1906, xxviii.
8. Levin: Conservatism in Surgery, *New Orleans Med. and Surg. Jour.*, 1912-13, lxxv, 227.
9. Sheldon: The Avoidable Mortality of Surgery, *Colo. Med.*, 1906, iii, 135.
10. Horsley: Some Modern Factors of Safety in Surgery, *Southern Med. Jour.*, March, 1913.
11. Kennedy: Attempt at Conservatism in Abdominal Surgery, *N. Y. Med. Jour.*, March, 1909.
12. Whiting: Conservatism in Surgery, *Jour. Am. Med. Assn.*, 1913, lx, 6.

#### INAUGURAL ADDRESS OF GEO. C. MOSHER, M.D., PRESIDENT, JACKSON COUNTY MEDICAL SOCIETY

KANSAS CITY, MO.

I take the first opportunity to express to the Society my very deep appreciation of the compliment paid me in electing me to the highest office in our organization.

No man but must feel proud of such a distinction, and I am grateful for the manifestation of confidence it shows.

If one undertakes such a task he should give it every ounce of energy he possesses to make his administration a success.

Ours is a great organization. It reaches out into various lines of activity, affecting the welfare of the community. We are not limiting ourselves to the routine maintenance of the scientific program and the internal affairs of the society.

We must be a power in all sociological and sanitary propaganda. There is no other piece of human machinery so correlated in this city. If we only utilize our influence as a coordinate body we must be first to be recognized and consulted in all schemes for city betterment.

As my own work now consumes all my available working time and having planned for the coming year a great deal of writing which must cut into my leisure, I feel that I could not, without the cooperation of a capable vice president, secretary, treasurer, council, program and entertainment committee to whom I may delegate a share of the duties, carry on such a work.

With such a cabinet and in this capacity as a member of the administration I shall hope to continue to do my share to advance the interests of the society and shall always remember with gratitude the recognition which this election has conferred on me.

The word which means most in any department of life's activities today is service. Unless we are able to do something to help make for progress in the society our membership is of no advantage to either the organization or to ourselves.

Briefly let us consider what are the subjects which should have our attention, as a society.

First: Our principal function is the maintenance of our scientific program.

Second: We would seek to include in our number all worthy members of the profession who are eligible.

Third: We owe a duty to the public in matters pertaining to health. This includes pure food, milk, water supply, sanitation and fresh air campaigns.



Fourth: While we are not engaged in politics and as an organization should not waste efforts in frivolous, trivial or selfish discussions of men and events, we must stand for the best in city improvements along the lines which affect the public welfare—one of the most important being the selection of a permanent commissioner of health.

Fifth: The hospitals of Kansas City are yearly increasing in capacity and the amount of material for clinical demonstration is unlimited. None of this is made available as could be done if systematic efforts were made along the lines which my predecessor, Dr. Wm. J. Frick, and the Clinical Society demonstrated could be done during the recent clinical week.

Sixth: In such matters as the new charter, public health sections should be prepared by members of the society.

Seventh: The permanent housing of the society and the library are problems of the near future.

Eighth: We should reform our method of annual election, placing this important function on a dignified basis.

A glance over the program of last year demonstrates such a variety and wealth of scientific papers that we can only hope to emulate in the new regime. Dr. Frick and the program committee deserve our hearty thanks for the very great energy shown and the discrimination in selection of papers to be presented before the society. Let us beseech the Fellows to be even more generous in the new program.

Several years ago one of the internes at the General Hospital remarked to me he did not attend the sessions of the County Society as no research work nor original papers were ever offered. We challenge any such criticism as being beside the fact, but let us each resolve to give to the program committee one worthy paper during 1917, or at least report a case for the clinical night program.

Second: In regard to the membership. My theory is that we can keep up the unwavering line far better in discipline as well as in work if the corps is recruited energetically and each available candidate is early brought into membership. It is not suggested that the standard is to be lowered nor that men who are not ethical should be accepted, but every man should be encouraged to do the best of which he is capable by a fraternal assistance rather than to be disheartened by carping criticism or unfriendly disposition to keep him from the association, which helps to make all of us try to rise to a just appreciation of our fellows.

Third: It is not the function of the County Society to keep itself in the limelight nor to

dictate the policy of any outside organizations. However, a certain amount of publicity is inevitable in such work as is in our peculiar province. Regarding tuberculosis—as witness the vast efforts of the late Dr. Edw. W. Schauffler in the open air schools, the tuberculosis pavilion at Leeds and the Mt. Vernon Sanatorium which are monuments to his untiring zeal in this great battle of education.

Several of our members have given talks on cancer control, school hygiene and other topics which have been under the Committee on Public Health and Education of the American Medical Association.

Much can be done by cooperation with other organizations regarding pure food and the milk supply.

Our specific committee, the medical milk commission, as we have recently had demonstrated, has made for itself a place in the sun. It needs only to continue its good work along the same lines. But our duty to the babies of the community does not end with the supply of a limited amount of the best milk which must be for only a small part of the community because of the extra price it must bring. We must still keep up the same effort to improve the general milk supply by constructive effort and cooperation and encouragement of the people engaged in producing the commercial milk supply of the city; to constantly improve this greater production of the food supply of our children.

The low rate of typhoid in Kansas City is all the argument needed to show what has been done by scientific watchfulness of our water supply.

We have taken part through the obstetric and pediatric section last year in the Baby Welfare week as a society work. It was a great success. No personal aggrandizement resulted but each of the men selected for the talks to lay audiences did his duty and kept his identity under the sanction of the society.

The passage of the ordinance making compulsory the prophylactic instillation of nitrate of silver solution in the eyes of the new-born was effected by our members.

These are suggestions of what have been accomplished as significant of what can be done.

A postgraduate school should be a feature of our medical life. This can best be brought about through the organized medical profession and should be consummation of the efforts of the men connected with the various hospitals so correlated that physicians all are attracted here instead of passing through Kansas City to Chicago and New York. A fair and unselfish arrangement can be made whereby the material

of the hospitals can be grouped and utilized for clinical demonstration under the auspices of the clinical society, which should be a department of the County Society activities.

Last, but not least, should be the interests of the medical library. Every member of the society should be a supporting contributor to the library and a regular patron of its very efficient service. Its income does not increase as rapidly as it deserves.

The society now has, clear of debt, the valuable property at the corner of Thirty-First Street and Gillham Road. Much credit is due to the finance committee for this commendable result of careful management. Dr. Hugh Miller, Dr. W. F. Kuhn and Dr. R. E. Castelow are the committee.

The location is a good one, and in the opinion of many of our members a building including an auditorium, committee rooms, reading rooms for the library and stack rooms for the increasing needs of the books which must be accommodated, should be at once undertaken. Considering the high cost of materials, the wisdom of waiting might be endorsed. However, building may only be a short while delayed. It is inevitable.

We must seek new quarters, but let us consider carefully the future and not be hasty in reaching a conclusion as to location and then regret it later on.

These suggestions simply indicate a part of the features of our work, all of which are more or less urgent. It is our work, not yours, not mine.

How much progress shall we, as a society, be able to report as having accomplished at the end of 1917?

We have as an honored member of the society a graduate of fifty years' standing, one who has always been a loyal, consistent champion of the society and a credit to organized medicine. It has been suggested that we establish a precedent and not only tender to Dr. C. Lester Hall a banquet in the near future but establish as a custom similar recognition for each of our fellows who reach the half century mark in medicine. Incidentally, I should like to have at the same time reminiscences and anecdotes of the lives of our late fellows, Drs. Edward W. Schauffler and David R. Porter, each of whom so nearly rounded out the fifty years, Dr. Schauffler graduating in 1868 and Dr. Porter in 1872. We shall honor ourselves in honoring them.

We have been lacking, as an organization in what may be considered esprit de corps. I am sure the society will pardon a few words in closing which are more or less "for the good

of the order" to all of us. We of the Obstetric and Pediatric Section are often asked by those who have watched the relations of the members of the section why is it that being rivals for business you fellows are always such good friends. The answer is that we have learned that it is always by cooperation and team work that we accomplish any results worth while.

We feel proud of the reputation the obstetric men have acquired and most especially for the progress which has been made in our special work since the organization of the section. An influence has gone out throughout the profession quite beyond the lives of our own section. Sterile gowns and rubber gloves are no longer looked on as a fad. Diagnosis and routine examinations of patients become the usual practice.

This is only an instance of what should be the universal attitude of members of all the profession.

The great contrast between doctors and lawyers has always been marked. Two lawyers abuse each other in court for the edification of the jury, then after court is adjourned they lock arms and go out to take a drink together, pleased with the success of their oratory.

Two doctors are not quite in the same situation, as the doctor's work is always a personal one. The doctor is a hermit from a business point of view. His life is spent with individual cases and he reverts more or less to the type of the animal who feels he must protect himself against his foes, the majority of which exist only in his imagination. It is so easy to drop thoughtless remarks which almost invariably go directly to the person about whom they are said.

The laity are constantly hearing of the fabulous fees that doctors receive. Now, as a matter of fact, no doctor ever receives too big a fee when it is considered he saves a life in return. Most often our fees are only the thanks of the grateful poor. When one of us does get a good fee it should be an occasion of rejoicing as these are so far apart but they do help to raise the standard of compensation for professional services for all the men in the community.

Let us bear in mind that in order to have a united profession which makes for itself a dignified and worthy place in society we must have for ourselves and among ourselves charity, confidence, faith, loyalty, forbearance and fraternity.

With these virtues comes the dawn of the day which is Utopia for the whole medical profession.—*Bulletin* Jackson County Medical Society.

Bryant Building.



# THE JOURNAL

## OF THE

# Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

MARCH, 1917

## EDITORIALS

### STATUS OF BILLS IN THE LEGISLATURE

As we write this article the bills in the legislature that have been opposed by our Association have reached a crucial period which requires the closest attention of all our members.

The Chiropractor Bill was introduced in the senate (S. B. 88) after having been defeated in the House. Every influence was brought to bear on the committee on eleemosynary institutions, to which the Senate Bill was referred, and those who favored the bill were given a hearing at a time when the opponents of the measure were not present. As soon as we learned of this action the county societies were informed and special pressure was brought to bear upon every member of the committee by the members of the county medical societies and numerous protests were forwarded to all senators. We were assured that the bill would not be reported out until we had been given an opportunity of presenting our argument against it but on February 19 the bill was reported out without recommendation. This action by the senate committee amounted to an unfavorable report as the bill cannot go on the calendar without a majority vote, which is extremely unlikely to succeed at this time because the senate has several bills of great importance to consider and all its time will be occupied with these measures.

Senate Bill 428 is the bill to license chiropradists. It is still in committee.

The Optometry Bill (H. B. 312) was taken up for engrossment on February 22 at a time when the opponents of the measure were occupied with other very important bills and not prepared to argue against its engrossment. The members of the county societies throughout the state had sent protests to their representatives and our committee appeared against it at a hearing, but the bill nevertheless was ordered engrossed. Our efforts will now be devoted to defeating it on the vote for final passage.

House Bill 646, creating a central board of control for eleemosynary institutions, has had a stormy voyage. Dr. Mitchell has shown splendid qualities of leadership in carrying the bill

through the various steps to bring it before the house in spite of much prejudice and antagonism to the measure itself and because of some technical defects in its preparation. It was never expected that the bill would have a smooth passage because of the radical change it makes in the management of the state institutions, but most of the members of the legislature have been won to a friendly spirit toward the movement and realize the necessity of establishing a better system of management of these institutions than has been possible under the present method of control. The bill has been perfected and will be pushed to passage as rapidly as possible.

The bill to create a division of child hygiene in the State Board of Health (H. B. 516), introduced by the Children's Code Commission, was reported with the recommendation that it do not pass. The bill was bitterly opposed by Christian Scientists, who objected to the medical inspection of school children as an unwarranted interference with personal rights. It requires long years of suffering from needless physical defects and an accumulation of evidence that many physical afflictions can be removed, prevented or corrected, to convince people that such laws as contemplated in H. B. 516 are enacted for their benefit and well-being.

H. B. 380, establishing three medical examining boards, is on the calendar for final passage. When it is called up there will be a strong fight against its passage.

### BABY WEEK—MAY 1 TO 6

"Baby Week" is approaching—this year it is to be celebrated at a time which promises more propitious weather, May 1 to 6.

Baby Week of 1916 was a marvelous success, and it is with profound gratitude and deep appreciation of the valued assistance of the medical profession of Missouri in making it so that we most earnestly solicit the cooperation of every county medical society in the state in the Baby Week Campaign of 1917.

Last year a letter was addressed to each county medical society several weeks in advance, asking that a committee be appointed which would respond to requests made by women's clubs in the same county, to speak, hold baby conferences, and assist in every possible way during the Baby Week. Each women's club was also notified by letter that it should apply to the county medical society of its own county for assistance which would prove vitally important and essential to the launching and successful issue of this new and valuable health movement.

It is especially gratifying to be able to mention the hearty and prompt response of the

county medical societies. We received letters from practically all sections of the state signifying great interest in the movement and reporting readiness for duty.

It is deeply regretted that, owing to the inexperience of the club women in health matters, not nearly all of the county medical societies were called upon, even where Baby Week was observed. The women are better prepared for team work and cooperation this year and we therefore assure the profession that its efforts will be much more appreciated.

Indeed, it is possible that this cooperative effort may do much to establish in the mind of the laity the facts concerning the ever-ready, self-sacrificing, humanitarian attitude of the profession toward the public welfare, especially in all matters pertaining to the betterment of the public health and the saving of life and, consequently, the sum of happiness and well-being.

The United States Children's Bureau describes the purposes of the campaign and methods by which it is to be carried out in bulletins which can be had for the asking and which are exceedingly helpful. All the women's clubs have been supplied with these bulletins and with reports of the many phases of Baby Week in 1916.

That Baby Week is no longer an experiment is shown by the fact that 2,000 communities scattered over every state in the Union took part in the movement last year. Forty-seven cities of over 100,000 population, and 700 villages and rural communities with less than 2,500 population observed Baby Week.

No one can dispute the inestimable value of this movement nor foretell its "end results." Already we know that infant mortality is reduced and infant welfare distinctly promoted. Quoting from the General Federation of Women's Clubs Magazine: "It is suggested that the campaign of 1917 should deal with the problems not only of infancy, but of children up to 5 or 6 years of age, that is, that this campaign should cover the period up to school age. Social workers long have emphasized the almost universal need of greater attention to the welfare of children between the ages of 2 years and 5 or 6 years."

Maternal care will also be considered. It is estimated that 15,000 women die yearly in this country from complications of pregnancy and child-birth. More women die between 15 and 44 years of age from these causes than from any other disease excepting tuberculosis. That childbed fever, a preventable disease, takes a toll of over 7,000 women annually shows the great need and vital importance of better care of women before and after confinement. "The welfare of the babies cannot be separated from the welfare of the mothers," and therefore both subjects, so closely allied, should be taken up in connection with Baby Week.

For the scientific part of all this work the women's clubs and other interested organizations must depend upon the alert, progressive, altruistic members of the medical profession. Therefore, in behalf of the Missouri Federation of Women's Clubs, county medical societies are most earnestly solicited to lend their assistance in making Baby Week, 1917, even greater than Baby Week, 1916.

Truly, there is no other profession that willingly, enthusiastically and gladly sacrifices its own interests for the good of humanity; that takes the lead in the promotion of a cause in which people frequently do not realize or appreciate what is being done for them, and often misconstrue the motives. On the other hand, we are not working for appreciation—if we were we should not be in the medical profession. We are prepared by education and training to lead in the public health work, which cannot really progress without our assistance.

So let's "put our shoulders to the wheel" and not wait too modestly to be urged by the women's clubs or others to conduct this work through the proper channels—that of the organized medical profession.

Communications concerning this important subject may be addressed to Dr. Dora Greene Wilson, Chairman Public Health, Missouri Federation of Women's Clubs, 626 Lathrop Bldg., Kansas City, Mo.

---

#### PROGRAM FOR SPRINGFIELD MEETING

The Committee on Scientific Work is preparing the program for the next annual session which will convene at Springfield, May 14 to 16. Members who wish to present papers at this meeting are requested to send their names and the titles of papers, together with an abstract not to exceed 300 words, to any member of the committee as soon as possible. Preference will be given to those members who have not appeared on the program during the past two years. It is especially requested that members outside of St. Louis and Kansas City will respond liberally to this request. There is already an oversupply of good papers from the two large cities, but the committee as well as the members in these cities desire to hear papers from members in the less populous districts.

It is not practical to read more than thirty-six papers during the session, so we hope those who have interesting and practical papers to present will respond at once to this request and assist the committee in making up an instructive and diversified program.

The members of the committee are Dr. J. P. Henderson, Argyle Bldg., Kansas City; Dr. W. C. Gayler, Wall Bldg., St. Louis, and Dr. E. J. Goodwin, 3517 Pine Street, St. Louis, Chairman.



## NEW MEDICAL JOURNALS

*The Rhode Island Medical Journal* is the latest state medical journal to join the ranks of organized efforts to maintain clean medical journals. The new journal published its initial number in January and presents a very creditable appearance. It consists of twenty-eight pages of reading matter and restricts its advertising to the standard established by the American Medical Association. Dr. Roland Hammond of Providence is the editor and will be assisted by a corps of associate editors and a business manager.

*Medicine and Surgery* is the title of a new publication edited and owned by Dr. Philip Skrainka of St. Louis, formerly editor of the *Interstate Medical Journal*. Dr. Skrainka's brilliant writings have given him a very eminent position in medical journalism. The new journal promises to exceed any of Dr. Skrainka's previous efforts in editorial work and the declaration that it will be an ethical publication in its advertising department will be a welcome announcement to all right-thinking medical men.

*Southwestern Medicine* is the title of another state association organ established to serve the states of Arizona and New Mexico and the city and county of El Paso, Texas. The latter has maintained a bulletin for a number of years which will now cease publication and merge with the new organ. The new journal will serve a large number of physicians and form an attractive medium of communication between the members of the profession in that section of the country.

## SARGOL CONCERN FINED \$30,000

On Feb. 17, 1917, Wylie B. Jones and Herbert E. Woodward, the two men convicted of fraud in the exploitation of Sargol, were fined \$30,000, Jones having to pay \$20,000 and Woodward the balance. Both fines were paid and the defendants waived their right to appeal and agreed to have the Sargol Company go out of business. Thirty thousand dollars is not a large amount to be assessed against men who have defrauded the public of millions. The fact, however, that these individuals but narrowly escaped going to the federal penitentiary and were undoubtedly put to no small additional expense in attempting to defend their nefarious business will have a wholesomely deterrent effect on other mail-order medical fakers.—*Journal of the American Medical Association*, Feb. 24, 1917.

## OBITUARY

## HENRY C. LUNDY, M.D.

Dr. Henry C. Lundy was born at Berryville, Ark., April 24, 1852, and died at Pleasant Hope, Mo., on July 28, 1916. Dr. Lundy was educated at Berryville, Ark., and studied medicine and graduated at Central Medical College, March 1, 1889. He was licensed to practice medicine, April 18, 1899. He first practiced at March, Dallas County, and at Schofield, Polk County. Later he moved to Pleasant Hope where he practiced for several years before his death. Dr. Lundy was a member of the Polk County Medical Society and the Missouri State Medical Association and was highly esteemed both as a physician and a citizen.

## CARL J. LUYTIES, M.D.

Dr. Carl J. Luyties, St. Louis, for thirty-three years a practitioner in that city, died at his home, Dec. 23, 1916, following an apoplectic seizure, aged 57. Dr. Luyties received his education in the public schools of St. Louis, after which he took the degree of PH.G. in the St. Louis College of Pharmacy in 1881. He then entered the Missouri Medical College from which he was graduated in 1884, and a year later received a degree from the Hahnemann Medical College, Philadelphia. After spending some time in postgraduate work in the clinics and hospitals of Vienna and other medical centers, he returned to St. Louis. He was resident physician of the St. Louis Children's Hospital from 1885 to 1888, a member of the visiting staff of the City Hospital, 1910 to 1914, and member of the St. Louis Medical Society, the Missouri State Medical Association, and a Fellow of the American Medical Association.

## NEWS NOTES

DR. J. L. EATON of Bismarck has been seriously ill with pneumonia for several weeks. He is reported to be improving.

DR. SELIG SIMON of St. Louis has been appointed Medical Director of the Jewish Home for Chronic Invalids and Tuberculosis situated on the Fee Fee Road, St. Louis County.

DR. F. H. MATTHEWS has been reelected president of the State Board of Health. The board will hold its next meeting in St. Louis March 26, 27 and 28 to examine applicants for license to practice medicine.

THE Medical Society of the Missouri Valley will hold its next meeting at Keokuk, Iowa, March 22 and 23. Hotel Iowa will be headquarters, and the sessions will be held in the Masonic Temple.

DR. S. B. SCHOLZ of St. Louis has resigned as medical referee for the Equitable Life Assurance Society at St. Louis and accepted the position of chief medical director of the Missouri State Life Insurance Company.

DR. C. M. NICHOLSON, because of a functional eye trouble, is taking an enforced rest at his country place in Virginia. He has obtained a leave of absence from the St. Louis University and immediately following his complete recovery, expects to visit South America and Japan,

DR. CLARENCE LOEB, formerly of St. Louis, has moved to Chicago, where he will reside permanently. He will be associated with Drs. Joseph C. Beck, Harry L. Pollock and Otto M. Rott. Dr. Loeb will limit his practice to diseases of the eye.

DR. I. N. STEBBINS of Clinton has purchased the Vernon Sanitarium located at Nevada, Mo. The Vernon Sanitarium was established by Drs. J. M. Yates and V. O. Williams, the latter being the chief surgeon of the Missouri National Guard, who died suddenly just before the guard went to the Mexican border.

FRANK S. BETZ COMPANY of Hammond, Ind., has just issued its 1917 catalogue of hospital equipment, including high pressure sterilizers, steel hospital furniture and therapeutic bath equipment. The reorganized company has put the business into ship-shape order so that orders are filled with promptness and exactness, and any complaint is given attention on the day it is received. A copy of the catalogue will be sent on request.

SINCE November 1 the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

H. K. Mulford Company: Mercurialized Serum-Mulford, No. 5-A and 5-B. Mercurialized Serum-Mulford, No. 6-A and 6-B.

Swan-Myers Company: Swan's *Bacillus Bulgaricus*.

Merck & Co.: Formin Tablets, 5 gr. and 7½ gm. Veronal Tablets, 5 gr.

H. K. Mulford Company: Pertussis Bacterin, Mulford.

Schering & Glatz: Iocamfen. Iocamfen Ampules.

E. R. Squibb & Sons. Urease-Squibb.

Non-proprietary articles: Acetylsalicylic Acid. Neutral Solution of Chlorinated Soda.

Merck & Co.: Barium Sulphate, Merck, for X-Ray Diagnosis. Theobromine, Merck.

Powers-Weightman-Rosengarten Co.: Barium Sulphate, P. W. R., for X-ray Diagnosis.

Western Chemical Company: Tabellae Dulces Aristochin (Western) 1 gr. Tabellae Dulces Heroin (Western) 1/100 gr. Tabellae Dulces Novaspirin (Western) ¼ gr. Tabellae Dulces Tannalbin (Western) 1 gr. Tabellae Dulces Terpin Hydrate with Heroin (Western) 1/100 gr.

ACCORDING to a statement issued by Surgeon General Rupert Blue, young medical men between the ages of 23 and 32 will be given an opportunity each month to demonstrate their fitness for admission to the grade of Assistant Surgeon in the U. S. Public Health Service. There are several vacancies in the government's mobile sanitary corps, which is now in the one hundred and nineteenth year of its existence, but in order to be recommended to the president for commission, a physical and professional examination must first be passed. As the tenure of office is permanent and the public health officers are ordered to duty in all parts of the world, they are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate. Boards will be convened at Washington, Boston, New York, Chicago, St. Louis, Louisville, New Orleans and San Francisco, but permission to take the examination must first be obtained from the surgeon general. The examination is searching and includes, in addition to the various branches of medicine, surgery and hygiene, the subjects of the preliminary education, history, literature and the natural sciences. The commissions will be issued as Assistant Surgeon and after four years of service, the young officers are entitled to examination for promotion to the grade of Passed Assistant Surgeon, and after twelve years of service to another examination for promotion to the grade of Surgeon. The annual salaries are: assistant surgeon, \$2,000; passed assistant surgeon, \$2,400; surgeon, \$3,000; senior surgeon, \$3,500; assistant surgeon general, \$4,000. When the government does not provide quarters, commutation at the rate of \$30, \$40, and \$50 a month, according to grade, is allowed. All grades receive longevity pay, that is, 10 per cent. in addition to the regular salary for every five years until the maximum of 40 per cent. is reached. When officers travel on official duties they are reimbursed their actual travel expenses.



THE American Association to Promote the Teaching of Speech to the Deaf is authorized to pay \$300 of the income received from the Alexander Graham Bell Grosvenor Memorial Fund for the essay, treatise, or other form of composition complying with the following conditions, that most clearly details how a mother can best teach and train her deaf child in the home from infancy to school age:

Each essay submitted must (1) be delivered at the Volta Bureau, by prepaid express or mail, before 12 o'clock noon of Nov. 1, 1917; (2) must be typewritten in the English language; (3) must contain at least 20,000 words, as it is doubtful if the necessary instructions and suggestions can be properly presented with a less number; illustrations may be used if the author prefers; (4) must bear a distinguishing mark or pseudonym, but nothing to tell who the author is or where residing; (5) must not be folded or rolled, but placed in a large, plain envelope bearing only the title of the essay and the distinguishing mark of the author; (6) must be accompanied by a small sealed envelope bearing the title and distinguishing mark on the outside and containing the name and address of the author in a signed statement that the essay is entirely the writer's own production; (7) must be wrapped and addressed to The Judges for the Alexander Graham Bell Grosvenor Memorial Fund Prize, Volta Bureau, 1601 Thirty-Fifth Street N. W., Washington, D. C.

The judges elected to pass on the merits of the offerings are:

Mr. and Mrs. Edmund Lyon, Rochester, N. Y.

Dr. and Mrs. A. L. E. Crouter, Mt. Airy, Philadelphia, Pa.

Mr. and Mrs. Gilbert H. Grosvenor, Washington, D. C.

These judges will render a report to the directors of the association, who reserve the right to withhold the prize should the judges report that none of the compositions possess sufficient merit to warrant making an award.

The composition awarded the prize becomes the property of the American Association to Promote the Teaching of Speech to the Deaf, to be published where and under such conditions as the directors may determine.

If further details are required, do not address the judges, but write to the Superintendent of the Volta Bureau, 1601 Thirty-Fifth Street N. W., Washington, D. C.

## MEMBERSHIP CHANGES, FEBRUARY, 1917

### NEW MEMBERS

John E. Alder, Cane Hill.  
Wm. M. Bayliss, Clarence.  
Chas. W. Bertram, St. Joseph.  
Joseph T. Brennan, Vichy.  
Jane E. Dunaway, Eldorado Springs.  
Joseph L. Eblen, Alton.  
Moses T. Edmondson, Fair Grove.  
Le Roy Farmer, Hartville.  
R. G. Hall, Fulton.  
Arlee I. Nichols, Ashland.  
John Royer, Joplin.  
Harry W. Squibb, Halfway.  
J. E. Stepp, Spruce, R. D. Ballard.

### CHANGE OF ADDRESSES

Guy Young Briggs, 3101 S. Grand Ave., to 3533 Arsenal St., St. Louis.  
Josiah B. Cunningham, Pomona, to Alton.  
Harry B. Davis, Thirty-First and Brooklyn, to 2200 E. Thirty-First, Kansas City.  
Harold A. Elkins, St. Louis, to Hardin.  
E. C. Gehrung, Denver, Colo., to St. Louis.  
O. S. Gilliland, Forty-Seventh and Troost, to 403 E. Forty-Seventh St., Kansas City.  
Charles Greenberg, Moss Building, to Physicians and Surgeons Building, St. Joseph.  
Allen L. Hearst, Eighth and Woodland, to 700 Shukert Bldg., Kansas City.  
J. F. Hendrix, Pomona, to Peace Valley.  
Henry Jacobson, Cen. Natl. Bank Bldg., to 705 Olive St., St. Louis.  
C. D. Johnson, 3902 Lafayette Ave., to 201 Boston St., Tulsa, Okla.  
H. J. Jurgens, Edina, to Quincy, Ill.  
J. B. Keber, First Avenue Hotel, to 25 E. Third Street, Denver, Colo.  
Wm. R. King, St. Louis, to Joplin.  
H. E. Kleinschmidt, 1069 Shenandoah Avenue, to 607 Federal Reserve Building, St. Louis.  
M. L. Klinefelter, 704 N. Taylor Avenue, to 401-09 Wall building, St. Louis.  
E. W. Lewis, 5987 Page Avenue, to 1300a Hodiamont Ave., St. Louis.  
Clarence Loeb, St. Louis, to 108 N. Stoll Street, Chicago.  
J. C. Lynch, 922 E. Fifteenth Street, to 726 Walnut Street, Kansas City.  
Dudley E. Mackey, St. Louis, to R.D. No. 1, Clayton.  
J. H. Martin, Edgell, to Redmondville.  
L. O. Nickell, Bonne Terre, to Holliday.  
George P. Pipkin, Old City Hospital, to 4027 Prospect Avenue, Kansas City.

Horace T. Price, St. Louis, to Tulsa, Okla.  
C. B. ShROUT, St. Louis, to Shawnee, Okla.  
Selig Simon, St. Louis, to Anglum.  
O. V. Smith, Diehlstadt, Mo., to Bay, Ark.  
Wm. C. Stewart, St. Louis, to Kenosha, Wis.

#### REINSTATED

Henry T. Byars, Caruthersville.  
Walter M. Dickerson, Armstrong.  
O. C. McBride, Oscar.  
R. M. Winn, Hannibal.

#### RESIGNED

Clay Allen, Blairstown.  
G. W. Wood, Bristol, Colo.  
John W. Ramsey, Tilsit.  
Edward W. Reid, Humphreys.  
Ulysses G. Strieby, Brownington.  
B. Kurt Stumberg, St. Louis.

#### DROPPED

J. W. Bingham, Pottersville.  
Oliver E. Kendall, Sikeston.  
H. S. P. Lare, St. Louis.  
Amon A. Mayfield, Sikeston.  
Thos. A. Michie, Tyler.  
Otis T. Morey, Salisbury.  
A. W. Thompson, Kansas City.

#### TRANSFERRED

Emil H. Lehmann, Navarre, Kans., to Kansas Medical Society.

#### DECEASED

Z. T. Blackwell, Joplin.  
Dexter B. Farnsworth, Springfield.  
Carl J. Luyties, St. Louis.  
James W. McClanahan, Forest City.  
C. L. Poynter, Eldridge.  
W. W. Rodman, Pierce City.

## MISCELLANY

### WHY SCHOOL INSPECTION LAGS

Medical inspection in the schools so far this year has been a failure because of the lack of cooperation of the parents, said Dr. R. B. Platte, inspector of the Greenwood School, recently. Practically no responses have been received by Dr. Platte from the parents, thus showing that most of them either are not in harmony with the movement or are negligent about their children's welfare.

Out of approximately 175 cards sent to parents by the inspector stating the child needed medical attention only about twenty have been returned. The card bears the name of the pupil and its ailment with the request that the family physician be consulted. On

the reverse side is a place for the physician to state he has attended the child.

"Fully 50 per cent. of the children I have examined have been troubled with bad tonsils, adenoids, impeded speech, blood impurity and such affections which can be easily remedied," the inspector said. "If the parents have not the money to afford a private physician the General Hospital will treat all such cases free. There is no reason why a child should remain in that condition."—*Kansas City Star*.

### HOME FOR DOCTORS

The establishment of a permanent "home" for the Jackson County Medical Society, to take the place of the present rented quarters and therefore to increase very materially the efficiency of the organization, is a project which is of more than passing interest to the general public. The part which the physicians of a community take in its betterment along many lines is becoming more and more extensive and the Jackson County Medical Society has for many years been counted one of the valuable assets of this community in many ways.

No other of the three great professions—ministry, law and medicine and surgery—puts forth more sincere efforts than the last named to benefit the community of which it is a part. The old idea that the physician welcomes human suffering and disease that he may profit from them has long been dissipated. There may be found even today a few benighted and prejudiced persons who profess to believe that it is the doctor's policy to keep people sick if not to make them so, and that he is working against his own personal interests when he takes part in health campaigns and preventive movements. But such persons are in an inconsiderable minority and their opinions are not worthy of refutation.

The physicians of Kansas City have always been foremost in all enterprises in their particular line—and very often outside it—having for their purpose the improvement of the community. An immense amount of so-called "charity" work is performed by them, individually and collectively, in the course of each year, and it is therefore certain that the establishment of a permanent home for the Jackson County Society will increase still further the usefulness of its members, not only within the scope of the practice of their profession but as a tangible asset of the city and county along the lines suggested.

The announcement is made that the society will tender a dinner to each of its members who completes fifty years of professional practice, and this feature of the society's activities is particularly noteworthy. To be for half a century a practicing physician, and of course an honorable and useful member of his great profession, is to render to the public a service well deserving of honor, not only at the hands of his professional colleagues but from the community generally. Dr. C. Lester Hall, it is stated, will be the first member of the society to be so honored, and there are others who will soon be eligible to the distinction. Nothing could be more appropriate and nothing could serve as a more emphatic incentive for the scrupulous maintenance of the high standards of the profession to which the physician and surgeon belong.—*Kansas City (Mo.) Journal*.



# SOCIETY PROCEEDINGS

## COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.  
 Webster County Medical Society, Dec. 6, 1916.  
 Platte County Medical Society, Dec. 8, 1916.  
 Cape Girardeau County Medical Society, Dec. 15, 1916.  
 Livingston County Medical Society, Dec. 16, 1916.  
 Madison County Medical Society, Dec. 17, 1916.  
 Carter-Shannon County Medical Society, Dec. 20, 1916.  
 Atchison County Medical Society, Dec. 26, 1916.  
 Linn County Medical Society, Dec. 30, 1916.  
 Clark County Medical Society, Dec. 30, 1916.  
 Benton County Medical Society, Dec. 30, 1916.  
 Chariton County Medical Society, Jan. 1, 1917.  
 Schuyler County Medical Society, Jan. 5, 1917.  
 Crawford County Medical Society, Jan. 9, 1917.  
 Adair County Medical Society, Jan. 10, 1917.  
 Dent County Medical Society, Jan. 10, 1917.  
 Mississippi County Medical Society, Jan. 16, 1917.  
 Camden County Medical Society, Jan. 23, 1917.  
 Scott County Medical Society, Feb. 13, 1917.  
 Cooper County Medical Society, Feb. 21, 1917.

## ST. LOUIS MEDICAL SOCIETY

### Annual Meeting, Jan. 6, 1917

The meeting was called to order at 8:50 p. m., by the president, Dr. L. C. Boisliniere.

The minutes of the meeting of December 23 were read and approved.

The following committees presented their reports: Dr. Rehfeldt for the Membership; Dr. Clapper for the Program; Dr. Baldwin for the Health and Public Instruction; Dr. Bliss for the Hospital; Dr. Schlueter for the Library; Dr. Seabold for the Censors; Dr. Kerwin for the Ethics; Dr. Falk for the Necrology, and Dr. Funkhouser for the Bartscher Fund. On motion all reports were adopted.

Dr. Funkhouser read his report as treasurer. On motion it was received with thanks.

Dr. Boisliniere then delivered his address as retiring president and introduced Dr. Albert H. Hamel, the president-elect.

Dr. Hamel delivered his inaugural address.

The musical program, under the direction of Mr. George Devereux, consisted of the following:

Prelude ..... Rachmaninoff  
 Air de Ballet .....Chaminade  
     Mr. George Devereux  
 Life and Death.....S. Coleridge Taylor  
 A Dissonance .....Borodine  
     Mrs. William Kerwin  
 A Recitation.....Miss Dorothy Kuhlmann  
 A Birthday .....Woodlan  
 Dearest ..... Homer  
     Miss Virginia Kelley  
 Polonaise ..... Chopin  
 Sextette for Lucia.....Transcription  
     Mr. George Devereux

On motion a vote of thanks was extended to the retiring officers for their excellent work during the year and also to those who contributed so delightfully to the entertainment of the members. Unanimously carried.

The society then repaired to the parlors for a reception where refreshments were served.

Adjournment 12:10 a. m.

Attendance 300.

### Meeting of January 13

The meeting was called to order at 8:30 p. m. by the president, Dr. Albert H. Hamel.

The minutes of the annual meeting were read and approved.

The program for the evening consisted of a general discussion of the proposed Workmen's Compensation Law for Missouri.

Dr. Malcolm A. Bliss presented the subject and introduced Dr. Harney of Illinois, who related his personal experience with the law as it exists in Illinois.

General discussion by Drs. Joseph Grindon, Robert E. Schlueter, William T. Coughlin, David E. Schmalhorst, Carroll Smith, Henry W. Hermann and R. Emmet Kane.

Dr. Kane moved the proposed draft of the Workmen's Compensation Law be endorsed by the society. Carried unanimously.

Senator Phillips and Dr. Harney replied to questions asked by members.

Senator Phillips extended the appreciation of the conference to the society and its representatives for their splendid services.

It was moved that Dr. Robert M. Funkhouser and Dr. Malcolm A. Bliss represent the society at the meeting of the Legislature in Jefferson City. Carried.

Dr. E. J. Goodwin read the proposed chiropractic bill, House Bill No. 8.

It was moved that the society oppose this bill and that a letter be sent to all Representatives notifying them of the action of the society. Carried unanimously.

Adjournment 10:15 p. m.

Attendance 138.

### Meeting of January 20

The meeting convened at 8:35 p. m., Dr. A. H. Hamel presiding.

The minutes of January 13 were read and approved.

The scientific program consisted of the following:

Symposium on Early Tuberculosis. 1. Diagnosis, Dr. L. C. Boisliniere. 2. Relation of Physical Signs to the Roentgen Ray, Dr. Jacob J. Singer. 3. Relation of Tuberculosis Infection to Clinical Tuberculosis, Dr. Eugene L. Opie. 4. Relation of the Community to Tuberculosis, Dr. Cleveland H. Shutt.

General discussion by Dr. Kessler; Drs. Singer, Opie, Boisliniere and Shutt closing.

Dr. Robert M. Funkhouser reported on legislative matters dwelling particularly on the bill to change the examining board law, optometry bill and chiropractic bill.

Adjournment 11:10 p. m.

Attendance 178.

### Meeting of January 27

The meeting convened at 8:40 p. m., the president, Dr. Albert H. Hamel, presiding. The minutes of January 20 were read and approved.

The scientific program consisted of a paper on "Conservative and Surgical Management of Acute Pyosalpinx," by Dr. William Kerwin.

Discussion by Drs. Major G. Seelig, Percy H. Swahlen, Treston R. Ayars, Quitman U. Newell, Reinhardt E. Wobus, Grandison D. Royston, Frederick

Taussig, Samuel E. Peden, Francis Reder and George Gellhorn; Dr. Kerwin closing.

With the consent of Dr. Schisler his paper on "Typhoid Perforation" was deferred until the next meeting.

A letter from Messrs. Brooks & Newton regarding the establishment of a Physicians' Telephone Exchange was read and referred to the council.

A letter from the Missouri Children's Code Commission regarding the endorsement of a Children's Code was read and referred to the committee on health and public instruction.

Dr. T. P. Brookes, president of the City Hospital Alumni Association, extended an invitation to the members to attend their meeting on Feb. 1, 1917.

Dr. Funkhouser reported that the chiropractic bill had been defeated by a vote of seventy-seven to fifty.

Dr. Engman read congratulatory telegrams from Senator Ransdell of Louisiana and Surgeon-General Blue, stating that the bill for a national leprosarium had passed the Senate.

Dr. Schluter moved that since Dr. Engman was the originator of the national leprosarium movement and since he had made several trips to Washington and expended a great deal of time and money in the support of this measure that he be requested to express to Senator Ransdell of Louisiana, Chairman of the Senate Committee on Public Health and National Quarantine, the thanks and appreciation of the St. Louis Medical Society for his splendid work in connection with this bill.

Attendance 102.

### Meeting of February 3

The meeting was called to order at 8:40 p. m., the president, Dr. Albert H. Hamel, in the chair.

The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

Presentation of a specimen of chyle from thoracic duct fistula following an operation for carcinoma of the cervical glands by Dr. Albert E. Meisenbach.

A paper entitled "Typhoid Perforation," by Dr. Edwin J. Schisler. Discussion by Drs. J. Curtis Lyter, Francis Reder and Walter C. G. Kirchner; Dr. Schisler closing.

A paper on "Intra-Ocular Tuberculosis and Associated Inflammatory Conditions of Upper Respiratory Tract," by Drs. Frederick O. Schwartz and Monte M. Meyers. Discussion by Drs. William H. Luedde, Charles S. Rehfeldt, J. Curtis Lyter and L. C. Boisliniere; Drs. Meyer and Schwartz closing.

On account of illness Dr. Greenfield Sluder was unable to open the discussion as announced in the Bulletin.

Dr. Baldwin read a report for the health and public instruction committee and submitted the following resolutions:

WHEREAS, House Bill No. 646 authorizing a Central Board of Control for the Eleemosynary Institutions of the state would place these institutions on a plane consistent with modern methods of administration and scientific care and control of the inmates, therefore be it

*Resolved*, That the St. Louis Medical Society heartily endorses this bill, and be it further

*Resolved*, That a copy of this resolution be sent to each Representative and the Governor with the request that they support the passage of the bill.

The resolutions were unanimously adopted.

Dr. Baldwin also submitted the following resolutions which were unanimously adopted:

WHEREAS, The Chiropractor Bill (Senate Bill No. 88) has been introduced in the Senate it is necessary that influence be brought to bear on it for its defeat, therefore be it

*Resolved*, That the St. Louis Medical Society puts itself on record showing its greatest disapproval of the bill and a copy of this resolution be sent to the Senate, and be it further

*Resolved*, That a definite request is hereby made for a hearing before the Senate Committee on this bill that we may have an opportunity to present our objections to the passage of the bill.

The following resolutions on the optometry bill were unanimously adopted:

WHEREAS, It has come to the attention of the St. Louis Medical Society that the legislature of Missouri is now considering a bill to license the practice of optometry in Missouri and

WHEREAS, The organized medical profession of Missouri has repeatedly protested against the enactment of such legislation as prejudicial to the eyes of the people of Missouri, therefore be it

*Resolved*, That the St. Louis Medical Society condemn House Bill No. 312 and that a copy of this resolution be sent to our Representatives.

Dr. Robert M. Funkhouser, chairman of the public health and legislation committee of the Missouri State Medical Association, reported on medical legislation matters now pending.

A letter from the Missouri State Medical Association inviting members to contribute to the program for the state meeting was read and ordered published in the Bulletin.

Dr. Funkhouser submitted the following resolutions on the national situation:

WHEREAS, A condition has arisen in our relations with foreign powers requiring the utmost skill, courage and judgment on the part of our Representatives, and

WHEREAS, The President has announced to the world that America stands ready to make any sacrifice for her principles and her honor, and

WHEREAS, The members of the St. Louis Medical Society in common with all other loyal citizens stand as a unit in supporting the policy communicated to Congress on February 3 by the President, therefore be it

*Resolved*, That the members of the St. Louis Medical Society commend the action of the President in the latest European crisis and express full confidence in him and pledge to him their support in any action he finds necessary to take, and be it further

*Resolved*, That a copy of this resolution be forwarded to the President at Washington.

Adjournment 10:55 p. m.

Attendance 86.

J. ALBERT SEABOLD, M.D., Secretary.

### Applicants for Membership, St. Louis Medical Society

Any member of the society who knows a good or sufficient reason why anyone of the following applicants is not eligible for membership in our society is requested to communicate at once with the membership committee.

Walter E. Hennerich, 3603 Utah Place. Sponsors: Cyrus E. Burford, Henry J. Scherck.

Ralph L. Cook, 2266 South Compton Avenue. Sponsors: Edgar F. Schmitz, Louis Rassieur.

Philip H. Scherer, 528 Frisco Building. Sponsors: James F. Clancy, Edward P. Buddy.

Edward S. Murphy, 4004 Chouteau Avenue. Sponsors: E. P. Porterfield, Emmett P. North.

William L. Dean, 2342 South Grand Avenue. Sponsors: John McH. Dean, William S. Lawrence.

Leon E. Dallwig, Barnes Hospital. Sponsors: Henry Schwarz, G. D. Royston.



WASHINGTON UNIVERSITY  
MEDICAL SOCIETY

Thirty-Sixth Meeting, Nov. 20, 1916

1. EXHIBITION OF CASES.

A. INFANTILE SCURVY.—By DR. BORDEN S. VEEDER.

B. RECURRENT TRANSIENT COMPLETE HEART-BLOCK.—By DR. SELIG SIMON and DR. G. CANBY ROBINSON.

A case was reported showing syncopal attacks at varying intervals since 1914. Observations made during several of these attacks make it evident that they resulted from complete heart-block, the patient suffering from Adams-Stokes syndrome. Electrocardiograms obtained in July, 1915, and in May, 1916, revealed a normal cardiac mechanism, which was not disturbed by exercise or vagus stimulation.

In September, 1916, during a period when syncopal attacks occurred frequently, electrocardiograms revealed complete auriculo-ventricular heart-block as well as a block in the branch of the conducting system which led to the right ventricle. The syncopal attacks at this time increased in frequency and severity and finally the patient died. A necropsy was not permitted.

The striking feature of the case is the sudden appearance of complete heart-block, causing attacks of unconsciousness with equally sudden, practically complete recovery, apparently without periods of partial block. The attacks caused by this sudden onset of complete block resembled true epilepsy.

DISCUSSION

DR. JOSEPH ERLANGER: I do not believe there is anything I could add to the report of this case. One thing might, however, be said in regard to the appearance and disappearance of heart-block. Even students in the laboratory come to realize that heart-block is not necessarily due to a complete destruction of the auriculo-ventricular bundle, and that heart-block may appear and disappear without any of the intermediate stages of partial block. A very common experience in the laboratory is to have a block come on suddenly while clamping the auriculo-ventricular junction of the turtle's heart. Opening the clamp leads to recovery, though it may not come for ten, fifteen or even twenty minutes. But when it does come, it is often an immediate and complete recovery without any of the intermediate stages. Now just why the block remains complete so long despite the release from compression and just why it may disappear suddenly without exhibiting any of the intervening stages is something that is yet to be explained, and probably when it is explained these cases of paroxysmal heart-block will receive their explanation also.

2. A CASE OF MYELITIS ASSOCIATED WITH THE BLOOD PICTURE OF ACUTE LEUKEMIA.—By DRs. SIDNEY I. SCHWAB, LLEWELLYN SALE and ERWIN R. SCHMIDT.

This case is reported on account of the unusual association between acute myelitis and acute leukemia, and because it was possible to observe the beginning of an acute leukemia during the course of a myelitis and to follow it by a study of the blood until the patient's death. It is further of importance as a contribution to the possible etiology of leukemia, and as an opportunity to bring to the attention of

other investigators the possibility of the casual relationship between acute spinal cord processes of an infectious nature and leukemia.

The patient, a man of 50 years of age, entered the Barnes Hospital June 27, 1916, completely paraplegic, incontinent, with distended abdomen, complaining of a burning sensation between the shoulders, and a dead feeling which extended as far as the fifth dorsal segment. The neurological examination showed a complete flaccid paraplegia, with no trace of voluntary movement in the legs. No single muscle or muscle group in the legs was capable of the slightest voluntary innervation. There was complete abolishment of all deep and superficial reflexes of the legs. Complete sensory anesthesia to all forms of sensory stimuli up to the fifth dorsal segment.

The early examinations of the patient's blood showed a normal blood picture, with a slight leukocytosis. In the course of the weeks following the blood picture changed until with a leukocytosis of 38,500 a marked predominance of large granular mononuclear cells was found. From this time on the blood picture became that of leukemia with an increase of white cells up to 130,000 on the day of the patient's death. Patient died July 31 and there was no necropsy.

The blood picture was considered to be a leukomoid one, a septic myelocytosis.

It is assumed further that if the infection in this case had not been so rapidly fatal, the patient might have developed an acute myeloblastic leukemia.

A study of the literature was made, and showed since 1903 no case in which the combination of myelitis and leukemic like blood was found.

3. THE COMBINATION OF THROMBIN BY SERUM ANTITHROMBIN.—By DR. H. S. GASSER.

In the circulating blood there exist prothrombin, calcium salts and antithrombin. Under favorable conditions prothrombin can be converted to thrombin through the intervention of a substance, cephalin, derived from the blood platelets or the tissue. The substance, thrombin, when once formed causes a change in the soluble blood protein, fibrinogen, so that it comes out of solution and forms the stringy portion of the blood-clot, the fibrin.

While solutions of purified thrombin readily cause coagulation of purified solutions of fibrinogen, thrombin can be injected into the veins of animals in large quantities without causing intravascular clotting. The explanation of this phenomenon was found in that the thrombin is very quickly combined by the antithrombin of the plasma, the fibrinogen thereby being protected from it. This occurs not only when thrombin preparations are injected but also during normal coagulation; only a portion of the thrombin formed being utilized in the change that occurs in the fibrinogen, the rest and probably larger portion becoming combined with antithrombin. The thrombin-antithrombin combinations cannot be broken up by any agent known to be present in normal blood but may be broken up by making the serum alkaline and then neutralizing. In this process the antithrombin is destroyed and the thrombin liberated.

The thrombin-antithrombin combination can be formed by incubating thrombin with antithrombin at 37 C. The compound so formed has the same properties as the combination which is formed during the natural coagulation process and which is found in serum. The thrombin-antithrombin combination is identical with the substance which in the literature on coagulation has been designated metathrombin.

#### 4. GROSS QUANTITATIVE CHANGES IN MUSCULAR TISSUE DURING PROLONGED FASTING WITH VIGOROUS ACTIVITY.—

By PROF. CHARLES W. GREENE of the University of Missouri.

##### DISCUSSION

DR. S. I. SCHWAB: I should like to ask Dr. Greene if there is absolute evidence that the salmon does not take in anything to eat during that whole period.

DR. E. L. OPIE: I wish to ask Dr. Greene if he has made any studies of the relationship between the visible fat in the muscle cells and the fat extractable by chemical methods. There is in the muscle fibers at the beginning of the salmon's journey a considerable amount of visible fat as well as a very large proportion of extractable fat. With certain pathological processes there is an abundant accumulation of visible fat in the kidney, for example, yet the extractable fat does not exceed the amount obtainable from the normal kidney. Is there a similar relationship of visible to extractable fat in the salmon's muscle?

DR. J. L. MORRIS: I should like to ask Dr. Greene whether he has figures for nucleoprotein. Having such, do they parallel the increase for protein?

#### Thirty-Seventh Meeting, Dec. 11, 1916

1. EXHIBITION OF CASES.
2. THE MOVEMENTS OF THE ARTERY WITHIN THE COMPRESSION CHAMBER DURING INDIRECT ESTIMATIONS OF THE BLOOD PRESSURE.—By DR. JOSEPH ERLANGER.

This report is based mainly on records (made with the aid of a compression chamber applied to the dog's femoral artery) reproducing the movements of the walls of the artery within the compression chamber. The records made during steady decompression show that the pulse does not penetrate the full length of the compressed artery when it first enters it; rather the penetration depth increases at the rate of 1 cm. per pressure decrement of 2 mm. Hg. Once blood has entered the artery there is not time enough between pulses for the artery to completely empty itself. This residue of blood increases rapidly at first until the thickness of about 0.08 to 0.24 mm. is attained, then more slowly if at all, and again more rapidly and at an accelerating rate before the fourth sound-phase begins. This changes to a retarding rate of increase with the first of the fourth sound-phase pulses, because the artery at this time fails to collapse during diastole beyond its full but undistended size. During the whole of the first-to-fourth sound-phase the pulse, especially in the lowermost parts of the compressed artery, shows a pre-anacrotic negative wave. This wave, as demonstrated by other methods, develops when a pulse passes through a localized compression constriction of a tube. It disappears when the tube is no longer constricted below its full but undistended size. The first sound-phase begins shortly after the pulse penetrates beyond the lowermost parts of the compressed artery; the fourth sound-phase at the instant during diastole the artery fails to pass beyond its stretched size. The behavior of the anacrotic limb of the pulse, as well as certain other phenomena, furnish evidence in support of the water hammer theory of sound production. The anacrotic limb varies in such a way as to account for the sounds of the first, third and fourth phases. The elevation of the crest of the pulses increases rapidly at first, then more slowly, and again very rapidly as the fourth sound-phase is approached. The last rapid

increase is mainly the result of the damming back of blood. The amplitude of oscillation at any point on the artery is given by the difference between the systolic and diastolic levels. The oscillation curves have the usual form, but the sudden diminution in amplitude usually seen at diastolic compression is exhibited best, sometimes only, by the middle region of the compressed artery.

##### DISCUSSION

DR. A. E. TAUSSIG: In the dog, the blood pressure phenomena, if I remember correctly, are similar, in some respects at least, to human blood pressure phenomena in hypertension. I should like to ask Dr. Erlanger whether in his work he observed anything that would throw light on a very curious observation that is occasionally made in hypertension cases in man; namely, that as you reduce the compression from above, you get as you reach the point of maximal pressure, a typical systolic sound; then, somewhere about where you would expect the beginning of the second phase, instead of getting the murmur in the artery, you get a complete silence, a silence complete at least so far as can be observed with a stethoscope. Then about the time the third phase would be expected to begin, you get a gradual but somewhat rapid increase in loudness from nothing to the sharp knocking note of the third phase. This phenomenon is so clearly marked that I have seen inexpert observers record the systolic blood pressure 20 or 30 mm. too low, mistaking the second reappearance of the sound for the point of maximal pressure.

DR. ERLANGER: I never have observed just that combination, but I think that I can put together two or three isolated observations in such a way as to reproduce the sequence of events which you say sometimes obtains in hypertension.

In the first place, I may say that it is very rare indeed to get a second sound-phase in the dog. That is to say, as you lower the compressing pressure you get the usual first phase sounds. These sounds for a time remain either of constant intensity or slowly increase in intensity. Then begins the characteristic ringing sounds of the third sound-phase, and finally, with the greatest distinctness, the fourth sound-phase begins. There is no fifth phase of silence. In dogs, therefore, the second phase may be lacking and there is no fifth phase.

With regard to the temporary disappearance of the first phase sounds, I may refer to some observations I have made on a model, not yet described. It is possible to produce sounds in a circulation model, by a method that I need not describe, and to hear these sounds below the compression chamber. If, when the sounds are just coming through, the artery is clamped peripherally and blood is thus permitted to accumulate, the sounds usually disappear. The same phenomenon is seen in animals also. Just what it is due to I cannot say positively, but it would seem that the accumulation of blood forces back into the artery the mechanism that produces the sound; the water-hammer recedes and the sound consequently grows fainter and disappears.

Certain cases of hypertension may be due to marked peripheral constriction. In such cases there is provided the mechanism not alone for driving blood back into the artery as soon as a little gets through and so causing the sound to temporarily disappear, but also for eliminating the second sound-phase, since it requires for its production a considerable volume flow. The return of the sounds during the third phase is due, presumably, to the growth of the processes that produce the sounds.



# SYNESTHESIA--ITS RELATION TO THE AURAE OF EPILEPSY AND MIGRAINE.—

By Drs. L. B. ALFORD and S. I. SCHWAB.

In this paper the authors attempt to describe synesthesia and allied phenomena, report briefly some cases studied, and try to point out its possible bearing on the aurae of epilepsy and migraine. By synesthesia is designated the process in which a sensory center of the brain is stimulated with the consequent production of a mental image, through some other than the usual pathway.

The subject is not a new one. Frequent references to it are found in non-medical writers in French, German and English. Such expressions as "seeing red," "a white lie," "a black outlook," are an indication of synesthetic phenomena. The occurrence of synesthesia has been estimated by various writers to be from 10 to 50 per cent. of all people.

Sir Francis Galton noted as characteristics of synesthesia the early age at which it becomes manifest, the permanence of the associations; the definiteness of the colors experienced; the lack of agreement of the color associations in the different subjects, and the unaccountableness of the associations. Synesthesia is often found in persons of unusual mental ability and it is supposed to be particularly common in musicians. Besides the association of color with words and sounds, colors may be associated with tastes, odors, tactile and temperature sensations. In fact almost all possible associations between senses have been found to occur.

Allied to the so-called psychic synesthesia are forms, which consist of the vivid mental image of some peculiar figure that is called forth by concepts of figures, words, verses, etc.

Also allied to synesthesia are visions or hallucinations in the same. They are known to occur in many people in such mental states as are found in associations with grief, fear, or intense study. They are most common, however, in the drowsy state that precedes and follows normal sleep.

We have studied five cases, having either word-color associations or visions or both.

In this study we have been impressed by the similarity of visions to the aurae of epilepsy and migraine. It would seem that aura, rather than representing the result of an epileptic discharge in the corresponding portion of the brain, may be merely a vision occurring in the drowsy state that precedes the loss of consciousness in epilepsy and may be considered as being entirely analogous to the visions that occur in normal persons in the drowsy state that precedes and follows sleep.

## DISCUSSION

DR. E. SACHS: As I understand it, one of the points that Dr. Alford claims is that because synesthetics who are normal, healthy individuals have these sensory phenomena, therefore is an epileptic who has these sensory phenomena they cannot be used as of localizing value. The conception that I have always had of the epileptic convulsion is this, and it seems to me that it fits very well into Dr. Alford's description of synesthesia. In the synesthetic, for example, a painter, who has visual associations, there exists a hyperirritability—you might almost call it a hypertrophy—of that portion of his cortex, and that the slight stimulation brings the visual association out; when his cerebral inhibition goes when he drops off to sleep, this visual phenomenon crops up first, as it arises from the most irritable portion of his cortex.

Now in an epileptic I think exactly the same thing happens. As the individual begins to lose consciousness, the one point of his cortex, which in one case may be the motor cortex or in another case the sen-

sory area, which is most irritable, first reacts and gives the patient the impressoin from that area.

DR. FRANK R. FRY: There is one way of looking at synesthesia, namely, that it represents the inability on the part of certain organisms to accomplish dis-sociations that other organisms accomplish readily.

In some cases of synesthesia, there is a good deal of psychic discomfort, because the patient cannot multiply or arrange certain concepts without a consciousness of disharmony. Epileptics are sometimes quite conscious of their aura; often of something unpleasant about it which they cannot exactly describe or dissociate. The synesthtic subject is a neuropath, more or less, usually not to the same degree of inconvenience as the epileptic, or hysteric or migrainac. There is some difficulty in sensory or sensorial conduction in all of them.

The question might be raised how much is this a matter of anatomical pathway, how much a matter of threshold?

DR. S. I. SCHWAB: All that I want to say is something about the spirit in which this investigation was started. Dr. Alford and I felt that in order to find out something about this most mysterious phase of epilepsy, we should look for some similar phenomenon in normal people and try to understand, as far as we could, something about the psychological mechanism of these things. The subjects who had synesthesia, seem to offer us a method of understanding, for the reason that the more intelligent a subject is, the more he can cooperate with you in explaining certain phenomena of his own consciousness, whereas in the epileptic naturally it is impossible to obtain anything about the aura except the pure memory factor or the emotional tone that might accompany it.

DR. R. A. GESELL: The conditioned reflexes of Pawlow may be of interest in this connection. They at least show how associations may develop. It is well known that the higher centers, even in the dog, have an influence on salivary secretion. Now Pawlow made a study of salivary secretion as affected by feeding and signals for feeding. He put a fistula in the salivary duct in a number of experiments which he carried out. Before each feeding, in one experiment, he rang a bell; and after carrying on this experiment for a number of weeks, the mere ringing of a bell caused a secretion of saliva. He also used the sounding of a tuning fork as a signal for salivary secretion, a tuning fork of a hundred vibrations. If that was sounded every time the animal was fed, for a few weeks, finally the sounding of the tuning fork alone produced psychic secretion. With the same animal using a tuning fork which vibrated ninety-six times a second, there was no secretion; or a hundred and four times, there was no secretion. Pawlow employed a metronome which beat once in ten minutes. Every time the metronome beat, the animal was fed. Then the animal was not fed and every time the metronome beat psychic secretion occurred. Pawlow set the metronome for a little less than ten minutes, or a little more, changing the time factor a little, and got no psychic secretion.

DR. GREENFIELD SLUDER: I would like to ask Dr. Alford if he can throw any light on the similarity of epilepsy and migraine, and if he can explain why migraine gets better in the declining years of life when epilepsy kills at the same period. Such explanation would give me help in some of my difficulties.

Liveing definitely states that migraines are variations in degrees of headache, and that the bilious, the sick or migraine, etc., are degrees of the same process, and cites the observations of Labarraque that they are disorders of the sensory ganglia, that they have peripheral exciting causes, whether those causes be eyes or ears or noses or what not. It falls to my

lot to see many headaches and I find from time to time this phenomenon brought out, that the lesion, according to its intensity, brings forth the entire symptom complex. Some of these have been nasal ganglion lesions from a surrounding inflammatory process and some of them have been postethmoidal, some sphenoidal lesions. In their gentler stages they make a headache, and in the fulness of their efforts they produce an ophthalmic migraine—that is, with aura, pain, nausea, vomiting, aphasia and a hemiparesis.

DR. ALFORD, closing: I cannot tell Dr. Sluder what migraine is. Its supposed relation to epilepsy is based on the frequency with which they occur together, either in the individual or in different members of a family. Hughlings Jackson formulated the theory that migraine is the sensory analogue of the epileptic convulsion.

I think Dr. Gesell's remarks are very interesting, in view of the fact that what seems to me the best explanation of synesthesia is that between the word and the color originally, there existed an emotional link. That is, the word, for some reason or other, caused, let us say, a pleasant emotion; then through the link of this emotion, they became connected. Later the emotion was suppressed and we have the word joined immediately to the color.

I think this view of epilepsy may at least help us out of one difficulty, namely, that of focal lesion. Pathologists have been looking in epileptic brains for focal lesions for a long time; so if we begin to look on the process as rather of a general nature, perhaps we shall have more success in finding the cause.

#### THE RELATION OF BODILY HABITUS TO VISCERAL FORM, POSITION, TONUS AND MOTILITY.—By DR. R. WALTER MILLS.

Extraordinary variation in visceral forms and topography as demonstrated by the Roentgen ray. Constancy of relation between certain types of physique and certain visceral forms are demonstrable. A similar relationship obtains between certain types of physique and degrees of alimentary tonus and motility. There is need for more precise standards for judging variations of visceral form, position, tonus and motility. The futility of a one-type standard and impracticability of an individual standard is pointed out. It is suggested that a type standard may be established, based on the proposition that many normal types of physique, visceral topography and degrees of alimentary tonus and motility exist and that an abnormal status only exists when there is a gross departure from the essential bodily plan as established by studies of large numbers of subjects of similar type. Arguments in favor of a multiple type standard are given. Man not a species of fixed characteristics within narrow bounds. A classification which suggests that majority of healthy individuals are abnormal cannot be accepted.

A classification is suggested in which there are two dominant major types, the hyperesthenic and asthenic, with intermediate types. The characteristics of types are discussed, and the relation of the previous work of Stiller and Schlesinger is brought out.

#### BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society held its regular monthly meeting Thursday afternoon, Jan. 25, 1917, in the office of Dr. T. C. Boulware. The meeting was called to order at 2 p. m., with the following members present: Dr. J. E. Stepp of Ballard, Dr. J. H. Fletcher of Spruce, Drs. T. C. Boulware, T. F. Lockwood, T. W. Foster and J. S. Newlon of Butler.

The minutes of the last meeting were read and approved.

The subject for general discussion was rheumatism. The subject was of great interest and discussed by all present.

Next meeting will be held on Feb. 22, 1917.

J. S. NEWLON, M.D., Secretary.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, Feb. 7, 1917, with twenty-three members present, the president, Dr. Floyd Spencer, in the chair. The minutes of the last regular meeting, also the minutes of the special meeting of January 23 were read and approved.

The following applications for membership having received the indorsement of the censors were duly balloted on and elected: Drs. H. O. Whittem, Burford M. Colby, Forest Thomas, J. D. Vaughn, H. K. Wallace and E. B. Kessler.

The following amendment having received its first reading at the previous regular meeting and a copy thereof mailed to each member of the society as published in the *Bulletin*, received the necessary votes and was duly declared adopted, as follows:

Amendment to Section 1, Chapter 4 of the By-Laws was introduced by Dr. P. I. Leonard and received its first reading: "There shall be added to the Standing committees a Committee on Economics, consisting of three members." The duties of this committee were outlined as follows:

"Committee on Economics.—The Committee on Economics shall consist of three members to be appointed by the president. It shall be its duty to investigate the financial relation of the physician in regard to his charges in private practice, medicine, surgery and the specialties, life insurance examination, contract and lodge practice, dispensary abuse, the Workmen's Compensation Act and its effect on physicians."

The society placed itself on record as indorsing and approving the following two acts as outlined and indorsed by the Missouri State Medical Association:

The Workmen's Compensation Act and House Bill No. 646, an act creating a State Board of Control for the state eleemosynary institutions, except the School for Deaf, the School for the Blind, Missouri Training School for Boys, the Industrial Home for Girls, the Confederate Soldiers Home and the Federal Soldiers Home.

At the suggestion of the Program Committee a motion was made and carried that our regular business meeting of March 7, 1917, consist of a "wet smoker" to be held at Hotel Robidoux, plates \$1 each.

The evening program was closed with a paper by Dr. J. I. Byrne, subject, "Operative Treatment of Pyloric Cancer." It was discussed by the following members: Drs. J. Geiger, F. H. Ladd, Payl Forgrave, H. S. Conrad and J. Farber.

There being no further business to come before the society the meeting adjourned.

W. F. GOETZE, M.D., Secretary.

#### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society held its regular monthly meeting February 12, in the office of Dr. Yount, Cape Girardeau, Dr. Hope, the newly elected president in the chair. Those present were: Drs. R. D. Blaylock, D. H. Hope, W. N. Howard, Arthur Poe, R. F. Wichterich, E. H. G. Wilson, and W. E. Yount. The minutes of the last meeting were approved as read.



The Society made a report of work for 1916 which showed thirty-eight members; number of meetings held, nine; average attendance, nine, and a little surplus in the treasury.

After discussion of medical defense and malpractice suits the program was called as follows:

"Puerperal Eclampsia," by Dr. W. N. Howard. The doctor reported several cases from practice and described the numerous methods of treatment.

"Indications for Induction of Premature Labor," by Dr. E. H. G. Wilson. The paper excluded the moral and legal side of the question but touched upon the question: Ought a woman be relieved of her pregnancy if certain pathological conditions exist? Usual discussion followed.

On motion the Society adjourned.

E. H. G. WILSON, M.D., Secretary.

#### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, February 8, with the following members present: H. S. Crawford, S. W. Fair, M. P. Overholser, B. L. Philips, R. D. Ramey, J. S. Triplett and A. C. Wunnick; Dr. J. S. Newlon, secretary of the Bates County Medical Society, and Rev. George C. Monroe, Pastor of the Harrisonville Baptist Church, were welcome guests of the society.

The program was as follows:

Report of a case of sciatica relieved by surgical interference, by S. W. Fair of Belton.

A clinical case of local bromodroses, confined to the heel of left foot, by R. D. Ramey of Garden City.

Both cases were of much interest and value to all who were present and were freely discussed.

First Aid Methods by J. S. Triplett of Harrisonville, which contained very valuable information.

Dr. J. S. Newlon of Butler addressed the society on matters of interest in the way of creating more interest in medical matters in this territory.

There was a general discussion of matters relative to medical legislation and the society adopted strong resolutions asking our representative and senator to oppose the chiropractic and optometry bills, as well as other legislation aimed at the weakening of our medical laws. Our county attorney was asked to enforce the medical laws and he was assured of the cooperation of the county medical society in prosecuting illegal practitioners of medicine. It was a splendid meeting and those who were unable to attend missed a great deal of valuable information.

H. S. CRAWFORD, M.D., Secretary.

#### CLAY COUNTY MEDICAL SOCIETY

The sixty-third year of the Clay County Medical Society opened in an auspicious manner at the Snapp Hotel, Excelsior Springs, Monday evening, January 29. We started out with an attendance of seventeen. Twenty-five members have paid their dues for 1917, against sixteen last year on the same date. We still have a few who "hang back" waiting to see what happens. *It will happen.* The interest in our work has never been better and every meeting impresses those who attend with its worthwhileness. We are going right on.

Dr. George B. Norberg of Kansas City delivered a lecture at this meeting on "Treatment of Inoperable Cancer." The doctor included in his address measures up to the hour. Necessarily, surgical procedures were spoken of, including the use of heat and cautery in uterine carcinoma. The Roentgen ray came in for a thorough discussion. Dr. Norberg said "we have to take off our hat to the Roentgen ray in many

cases, but its use must be backed by the best skill obtainable." He said that sarcoma yielded much more readily to ray therapy than the superficial. From the "blue-blister" to the cauliflower mass, the subject was unraveled. Radium came in for its share in therapy, both surface application and by the buried capsule. He touched on diagnosis of carcinoma of the mammary gland, and spoke strongly condemning the confidence usually placed in pain as a symptom. It is one of the most misleading points in diagnosis and no case should be considered benign because of the absence of pain. Considering that there are from 150,000 to 175,000 cases in our country annually, the doctor's address was most opportune.

The discussion followed and was most interesting. Drs. Maltby, Lowrey, Wallace, Parker and Baird spoke of experience with the disease. Postoperative neuritis was a problem; the most intractable forms of cancer were those of the gallbladder, rectum, fundus uteri and liver. The nevus, the innocent wart, the mole and the blue-blister need expect no mercy in Clay County hereafter.

J. J. GAINES, M.D., Secretary.

#### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in the High School Building, Clinton, on Wednesday, February 12. The meeting was called to order at 2:30 p. m. by the president, Dr. A. J. McNees. Other members present were Drs. J. R. Hampton, W. Cline, R. J. Smith, E. C. Peelor, T. A. Finley, S. A. Poague, S. W. Woltzen, N. I. Stebbins and F. M. Douglass.

Dr. W. Cline reported a case; a 4-months-old child. Dr. J. R. Hampton spoke of pleuropneumonia in a woman 48 years old.

Dr. R. J. Smith and S. A. Poague reported cases and Dr. T. A. Finley asked for help in treating a girl 9 years old with an indefinite train of symptoms. All these cases were well discussed by every member present and treatment suggested for each one.

F. M. DOUGLASS, M.D., Secretary.

#### PETTIS COUNTY MEDICAL SOCIETY

The bimonthly meeting of the Pettis County Medical Society was held at the courthouse on Monday evening, February 19, Dr. M. P. Shy, presiding.

There being no routine business to be considered, the scientific program was taken up immediately after the reading and approval of the minutes of the preceding meeting.

Dr. M. A. Hanna and Dr. F. M. McCallum, both of Kansas City, were present on invitation from the society and read papers. Dr. Hanna discussed "The Induction of Labor" and Dr. McCallum's paper was entitled "Vesicle Neoplasms." Both of these papers gave evidence of extensive study and research, combined with a broad experience on the part of the authors. The papers were very much enjoyed, as was evidenced by the liberal discussion which followed.

There were fifteen members present. We now have a paid-up membership of twenty-eight for 1917. Our society is in a thrifty condition, and with the present harmonious relations of the profession in the county, we expect to make this one of the best years within the history of the society.

The next meeting will be held on the evening of March 3, at which time Dr. M. L. Sands of Warsaw will read a paper on "Psychotherapy." The membership is urged to attend and visiting physicians from neighboring societies are invited.

W. M. WHEELER, M.D., Secretary.

### SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society met in Illmo, Feb. 20, 1917, with the following members present: Drs. Cannon, Hutton, Mayfield, Cline and also Dr. G. T. Dorris of Illmo, whose application for membership in the Society was approved.

Dr. E. J. Nienstedt of Blodgett presented a transfer card from Cape Girardeau County Medical Society which was approved and his membership was placed with this society.

Officers for 1917 were elected as follows: President, W. O. Finney, Chaffec; vice president, G. S. Cannon, Fornfelt; secretary-treasurer, J. A. Cline, Oran; delegate, L. O. Rodes, Sikeston; alternate, G. S. Cannon, Fornfelt.

A motion was made and carried that the society meet the third Tuesday in March, 1917, at Oran for the purpose of rearranging the fee bill and such other business that might come before the society.

A motion carried that the secretary, in behalf of the Scott County Medical Society, request Senator Von Mays to use his support and influence in the passage of the Injunction and Abatement Bill which is at present before the senate.

The following resolutions were adopted by the society:

*Be It Resolved*, That the Scott County Medical Society go on record as opposed to the passage of House Bill No. 312 known as the Optometry Bill; also House Bill No. 8, known as the Chiropractic Bill, and House Bill No. 380, which bill establishes three medical examining boards.

We most respectfully urge our state senator and representative to vote against said bills and do all in their power to defeat them.

We also wish to indorse the action of the State Legislative Committee and urge our senator and representative to aid them in their efforts to have good and true medical laws enacted.

We also indorse the Children's Code Commission and State Board of Charities and Correction in their efforts to secure the passage of all laws that are beneficial to the human race. And be it further,

*Resolved*, That a copy of these resolutions be sent to our senator and representative, and spread on the minutes of our society.

The following resolutions were also adopted:

*Be It Resolved*, That the Scott County Medical Society indorse the idea of a central board of control for the state eleemosynary institutions, because this central board of control will increase the efficiency of medical service in these institutions and also be a monetary saving, and be it further

*Resolved*, That we memorialize the present session of the state legislature to create this board and pass any other measure necessary to perfect the same, and be it further

*Resolved*, That a copy of this resolution be sent to the president of the senate and the speaker of the house of representatives, and spread on the minutes of this society.

There being no further business to come before the society, it was moved and carried that we adjourn until the third Tuesday in March, to meet in Oran.

J. A. CLINE, M.D., Secretary.

### WRIGHT COUNTY MEDICAL SOCIETY

The Wright County Medical Society met in regular session in Dr. R. M. Rogers' office in Mansfield on the evening of Feb. 1, 1917.

Dr. Rogers presented the society with a very interesting clinical case. The members discussed the case and some valuable points were brought out in the treatment of diabetic gangrene. After discussing the case, Dr. Rogers read a very instructive paper on

catarrh. In this paper the doctor brought out all the important points in the diagnosis and treatment of this common ailment and dwelt very extensively on the bacterin treatment. All doctors present joined in discussing this paper and were much interested.

Owing to the inclemency of the weather the attendance was small but the interest was good.

Dr. Lee Roy Farmer of Hartville was elected to membership.

There being no further business, the society adjourned to meet in Hartville on the first Tuesday in May.

J. A. FUSON, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

TABELLAE DULCES ARISTOCHIN (WESTERN), 1 Gr.—Each tablet contains aristochin 1 grain with cocoa, sugar and saccharine as vehicles.

TABELLAE DULCES HEROIN (WESTERN),  $\frac{1}{100}$  Gr.—Each tablet contains heroin  $\frac{1}{100}$  grain with cocoa, sugar and saccharine as vehicles.

TABELLAE DULCES NOVASPIRIN (WESTERN),  $\frac{1}{4}$  Gr.—Each tablet contains novaspirin  $\frac{1}{4}$  grain with sugar, starch, liquid petrolatum, saccharine, curcuma and oil of lemon as vehicles.

TABELLAE DULCES TANNALBIN (WESTERN), 1 Gr.—Each tablet contains tannalbin 1 grain with cocoa, sugar and saccharine as vehicles.

TABELLAE DULCES TERPIN HYDRATE WITH HEROIN (WESTERN),  $\frac{1}{100}$  Gr.—Each tablet contains terpin hydrate  $\frac{1}{2}$  grain, and heroin  $\frac{1}{100}$  grain, with cocoa, sugar and saccharine as vehicles. Western Chemical Company, Hutchinson, Minn. Accepted for the Appendix to New and Nonofficial Remedies (*Jour. A. M. A.*, Feb. 10, 1917, p. 461).

### PROPAGANDA FOR REFORM

GLYCEROPHOSPHATE COMP. AMPULS, 1 Cc., SQUIBB.—The Council on Pharmacy and Chemistry refused recognition to Glycerophosphate Comp. Ampuls, 1 Cc., Squibb, each said to contain sodium glycerophosphate 0.1 Gm., strychnin cacodylate 0.0005 Gm., and iron cacodylate 0.01 Gm., because the name did not indicate the potent ingredients and because the administration of a mixture of sodium glycerophosphate, strychnin, cacodylate and iron cacodylate is irrational. In recognition of the Council's conclusion, Squibb and Sons state that the sale of the ampules has been discontinued. This cooperation in the work of the Council on Pharmacy and Chemistry is gratifying (*Jour. A. M. A.*, Feb. 3, 1917, p. 388).

EMETINE IN DYSENTERY AND PYORRHEA.—Emetine is accepted today as an almost ideal specific against amebic dysentery. Experience indicates that by its use abscess of the liver can be prevented and even cured. When a differential diagnosis between amebic and bacillary dysentery cannot be made, emetine may be of diagnostic value because improvement follows from its use if the case is amebic. In neglected cases and some other forms of the disease the emetine treatment may fail of complete success. As a direct cure for pyorrhea emetine seems to have failed, not because it does not act on the ameba which are found in the pyorrheal pockets but because pyorrhea is not caused by ameba (*Jour. A. M. A.*, Feb. 3, 1917, p. 374).



**THE PHENOLSULPHONEPHTHALEIN TEST.**—It has been assumed that excretion of less than 60 to 80 per cent. of phenolsulphonephthalein in two hours is an indication of renal insufficiency. It has been found, however, that in certain experimental conditions, phenolsulphonephthalein may be destroyed in the body and therefore not appear in the urine although the kidneys function normally. If this condition is found to occur in clinical cases the interpretation of the tests may have to be limited to this: an excretion of 60 to 80 per cent., i. e., a positive result, within two hours after the injection of the phenolsulphonephthalein is evidence of satisfactory renal activity (*Jour. A. M. A.*, Feb. 3, 1917, p. 379).

**THE WILLARD PYORRHEA TREATMENT.**—After defrauding the public of amounts estimated by the federal investigators at \$75,000 a year by means of a fake cure for pyorrhea, F. W. Willard, M.D., D.D.S., has been denied the use of the United States mails. The business of the Willard concern, apparently owned by Oren Oneal, consisted of a mail-order plan of a so-called home treatment for pyorrhea or Riggs' disease (*Jour. A. M. A.*, Feb. 10, 1917, p. 477).

**SARGOL.**—The case of the United States against Wylie B. Jones and H. E. Woodward, proprietors of "Sargol" came to an end, Jan. 30, 1917, after a trial lasting thirteen weeks. Jones was fined \$20,000 and Woodward was fined \$10,000. Sargol was a nostrum of the get-fat-quick variety; as an alleged "flesh builder" it was advertised extensively and intensively by its exploiters (*Jour. A. M. A.*, Feb. 3, 1917, p. 381; Feb. 10, 1917, p. 468; Feb. 24, 1917, p. 642).

**FATE OF TRYPSIN IN THE STOMACH.**—Judging by recent experiments, it appears that the proteolytic enzyme of the pancreas isolated as trypsin is capable of withstanding a rather long digestion in presence of hydrochloric acid and pepsin provided that sufficient protein is present to combine with all or a part of the acid and so bring the free acid down to a certain level. From the observations it seems possible that some tryptic digestion may occur within the stomach when the free acid is low from combination with protein. The results do not, however, even remotely suggest that the administration of a few grains of the various commercial products claimed to contain trypsin or pancreatin would have the slightest therapeutic significance (*Jour. A. M. A.*, Feb. 17, 1917, p. 554).

**FIRWEIN.**—The Council on Pharmacy and Chemistry reports that Firwein (The Tilden Co.) is sold under the claim that when swallowed it has a "predilection" both for the bronchial mucosa and also for the genito-urinary organs. The Council finds that little information is given in regard to the composition of Firwein. As the composition of Firwein is secret, the therapeutic claims unwarranted and its use irrational, the Council declared it inadmissible to New and Nonofficial Remedies (*Jour. A. M. A.*, Feb. 17, 1917, p. 564).

**FIROLYPTOL PLAIN AND FIROLYPTOL WITH KREOSOTE.**—The Council on Pharmacy and Chemistry reports that Firolyptol (The Tilden Company) is said to be composed of eucalyptol 10 drops, cottonseed oil  $\frac{1}{2}$  ounce and Firwein enough to make 1 ounce, and that, as the composition of Firwein is secret, the composition of Firolyptol is also unknown except to the manufacturers. Firolyptol with Kreosote is said to contain, in addition to whatever may be the component parts of Firolyptol, 10 minims of creosote to each ounce. The advertisements for these two preparations seem to have for their keynote the assertion that cottonseed oil is a particularly valuable nutrient and that when combined with the constituents of Firolyptol and Firolyptol with Kreosote it becomes particularly valuable to the tuberculous. The Council

discussed the extravagant claims made for these proprietaries; reminds that food and fresh air, not drugs, constitute the fundamentals of the treatment of tuberculosis; and finds that neither of the products is acceptable for New and Nonofficial Remedies (*Jour. A. M. A.*, Feb. 17, 1917, p. 564).

**MORE MISBRANDED NOSTRUMS.**—The following "patent medicines" were found misbranded under the U. S. Food and Drugs Act chiefly because false and fraudulent therapeutic claims were made for them: Collins' Ague Remedy, admittedly containing 33 $\frac{1}{3}$  per cent. alcohol.—Swaim's Panacea containing nearly 5 per cent. alcohol, 58.5 per cent. sugar, 0.1 per cent. salicylic acid and some sarsaparilla.—Swayne's Panacea, essentially the same as Swaim's Panacea in composition.—Crozone, capsules containing a white pill and a red oil: the oil was oil of pine or oil of juniper dissolved in a fatty oil, while the pill consisted essentially of strychnine, a trace of brucine, aloin, hexamethylenamin, lithium carbonate, potassium nitrate and probably a trace of atropin.—Freeman's Balsam of Fir Wafers, lozenges consisting of sugar with very small amounts of oil of turpentine and eucalyptus with the possible presence of balsam of fir.—Renne's Pain Killing Oil, essentially a water-alcohol solution of sassafras oil and cayenne pepper containing 78.6 per cent. alcohol and 4 per cent. volatile oils and possibly a little mustard oil and soap.—Schuh's Yellow Injection, an aqueous solution of boric acid, carbolic acid and berberin.—Schuh's White Mixture, a mixture of mucilage of tragacanth, balsam of copaiba, and probably sandalwood oil, flavored with cassia.—Elmore's Rheumatic Goutaline, apparently a dilute tincture of colchicum.—Armstrong's Croup Ointment, containing eucalyptus and traces of other oils, possibly cassia and thyme.—Anticephalalgine, containing 30 per cent. alcohol and 4 grains acetanilid to the ounce, sodium bromid, sodium salicylate, caffeine and antipyrin.—Wright's Rheumatic Remedy, an emulsion composed principally of turpentine, methyl salicylate, sugar, acacia, and water, with probably some resinous or plant extractive matter.—H. G. C., a watery solution of borax and berberin sulphate.—Russell's White Drops, containing 13 to 16 per cent. of alcohol as well as codein.—Pneumovita, a sweetened gum, containing small amounts of charcoal and iron phosphate having a wintergreen flavor.—Mecca Compound, an ointment containing carbolic acid, camphor, borates, zinc compound, sodium soap in a soft paraffin base.—Best Cough Remedy, a spearmint syrup containing alcohol, chloroform and morphin.—Stella-Vitae, a female weakness remedy.—Vegetable Pulmonary Balsam, a syrup flavored with spearmint, sassafras, containing alcohol and opium (*Jour. A. M. A.*, Feb. 17, 1917, pp. 565 to 566; Feb. 24, 1917, p. 651).

**BINIODOL.**—The Council on Pharmacy and Chemistry reports that Biniodol is claimed by the manufacturer, Charles C. Yarbrough, Memphis, Tenn., to be a solution of 1 per cent. mercuric iodid and 2.75 per cent. guaiacol in a vegetable oil and that it is marketed with the implication that it is new and superior to other oil solutions of mercuric iodid. The Council found that the claims of novelty and of superiority were not substantiated by the evidence. Clinical investigation did not demonstrate the effects of Biniodol to be different from those of solutions prepared in the A. M. A. Chemical Laboratory, with and without guaiacol. The Council declared Biniodol inadmissible to New and Nonofficial Remedies because claims of superior efficiency were not established; and because it is an unessential modification of an established non-proprietary article marketed under a proprietary name (*Jour. A. M. A.*, Feb. 24, 1917, p. 650).

## BOOK REVIEWS

**THE PATHOLOGY AND DIFFERENTIAL DIAGNOSIS OF INFECTIOUS DISEASES OF ANIMALS.** Prepared for students and practitioners of veterinary medicine. By Varanus Alva Moore, B.S., M.D., V.M.D., Professor of Comparative Pathology, Bacteriology and Meat Inspection, New York State Veterinary College at Cornell University, and Dean of the College. Fourth edition, revised and enlarged, with 120 illustrations. Cloth. Price, \$4, pp. 593. New York: The Macmillan Company, 1916.

It would be impossible to include within a textbook all of the knowledge on the subjects treated in this work. The author has done well in presenting that which is most helpful to the student. The important references furnished enables the student to familiarize himself more fully with each subject.

References on certain subjects as tuberculosis, tetanus, rabies, foot and mouth disease, etc., particularly should be of interest to medical men.

W. K. T.

**ANNALS OF SURGERY**, January, 1917. J. B. Lippincott Company, Publishers, Philadelphia.

This issue contains nine original articles as follows: Fractures of the Lower Extremity or Base of the Radius, Lewis Stephen Pilcher, M.D., Brooklyn; Volkmann's Ischaemic Paralysis and Contracture, Alford S. Taylor, M.D., New York City; Gunshot Injuries of the Peripheral Nerves and Their Treatment, Hermann Fisher, M.D., New York City; Carcinoma of the Breast, John Chadwick Oliver, M.D., Cincinnati; Autogenous Fascial Reconstruction of the Bile-Duct, Nathaniel Ginsburg, M.D., and John Speese, M.D., Philadelphia; Splenectomy for Repeated Gastro-Intestinal Hemorrhages, Donald C. Balfour, M.D., Rochester; Enterostomy for Ileus, Charles N. Dowd, M.D., New York City; Temporary Colostomy, Harry A. Shaw, M.D., and John Hunt, M.D., Seattle; Fibroma of the Small Intestine Resulting in Intussusception, J. E. James, Jr., M.D., and S. W. Sappington, M.D., Philadelphia.

There are 128 pages with numerous illustrations, making a book of diversified interest for the practitioner.

**ANNALS OF SURGERY**, February, 1917. (J. B. Lippincott Co., Phila.).

In this issue there are twelve original articles. The leading paper is by Dr. Charles H. Mayo on "The Choice of Operative Procedure in Cancer of the Rectum and Pelvic Colon." Dr. N. B. Carson, of St. Louis, contributes an article on "Papilloma of the Umbilicus."

**AN INQUIRY INTO THE PRINCIPLES OF TREATMENT OF BROKEN LIMBS.** A philosophico-surgical essay, with surgical notes. By William F. Fluhrer, M.D., Consulting Surgeon to Bellevue and Mount Sinai Hospitals. Pp. 128. 20 plates. New York: Rebman Company.

The author has well described this treatise as "a philosophico-surgical essay." The title, however, is misleading, in that while one would expect a rather critical survey of the treatment of fractures, we find a rather discursive description of a single method devised by the author in 1873 and used successfully by him since that time. What is said is interesting and in the main of practical value, but we feel that too much space is devoted to obtuse philosophic discussion of cause and effect; as a consequence, the main issue becomes clouded.

In brief, the book is a plea for the treatment of simple and compound fractures by perfectly fitting

external splints in the form of a plaster cast reinforced by perforated tin strips one-fourth inch wide. The cast is applied while extension is made to the extremity by means of a compound pulley, counter pressure being made against the perineum through a post on a pelvic support. Great stress is laid on accuracy of fit, secured by careful modeling of the case to the outline of the extremity, for the author believes that absolute immobilization of the fragments is essential to union. The method is used for the upper and lower extremities and for fractures of the leg and thigh.

The method advocated of treating compound fractures and amputation stumps by suspension in frames with light dressings to aid drainage and give comfort, is along the lines found most useful in treating such cases in the present war, though the author has been using this form of dressing for years.

There is an historically interesting chapter on pre-antiseptic days at Bellevue Hospital and also one on the various instruments devised by the author for bone work.

On the whole, while the book makes interesting reading, it cannot be considered as handling the subject in a thorough and up-to-date way.

F. D. D.

**ESSENTIALS OF LABORATORY DIAGNOSIS.** By Francis Ashley Faught, M.D., Director of Laboratory Department of Clinical Medicine, Medico-Chirurgical College of Philadelphia. Fifth Revised Edition. F. A. Davis Company, Philadelphia.

In presenting this the fifth edition of Laboratory Diagnosis, Dr. Faught has greatly enlarged on his previous editions so that it contains over one hundred pages more of information. This edition is somewhat rearranged and the subject matter which has been previously grouped into seventeen sections is now condensed into thirteen sections.

In his preface the author states that the object of the book is not to replace the larger and comprehensive books on clinical medicine but only as a condensed adjunct for medical students and busy practitioners.

In Section 1 he describes the microscope, and points out the essential features of an ideal instrument. In Section 2 he describes the analysis of sputum and the technique for carrying out the analyses. Section 3 is devoted to the blood; Section 4 to sphygmomanometry and sphygmography, in which he outlines the technique of systolic reading and the application of the above methods. In Section 5 he has grouped all of the animal parasites, including those of the blood as well as some of those of the higher orders. In Section 6 he gives the technique for the terminations of the functions of the stomach including the chemical and Roentgen-ray examinations. In Section 7 he has condensed the physical and chemical examinations of feces. In Section 8 he has treated the examination of the urine in a similar manner; Section 9 similar for the bony fluids; Section 10 he gives the physical and chemical characteristics of the human milk including test for formaldehyd. In Section 11 he gives a general outline for bacteriological methods including preparation of some of the media, classification of bacteria, some of the staining methods and concludes with description of some of the more common pathogenic bacteria. Section 12 he has devoted to sero-diagnosis, where he gives the technique of typhoid, Wassermann, Noguchi, the new test for pregnancy and discusses some of the other agglutination reactions. Section 13 is devoted to suggestions for beginners in laboratory work as to selection of the proper apparatus and reagents for carrying out this work.

F. A. B.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee  
ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

APRIL, 1917

Number 4

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION } W. H. BREUER, M.D., Chairman  
COMMITTEE } S. P. CHILD, M.D.  
                  } M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### SHOULD THE ASYMPTOMATIC INDIVIDUAL WITH A POSITIVE WASSERMANN BE TREATED?\*

MARTIN E. ENGMAN, M.D.  
ST. LOUIS

I have come this evening not to talk but to listen. The statement of the proposition for discussion is "Should the Asymptomatic Syphilitic Be Treated?" or "How Shall the Asymptomatic Syphilitic Be Treated?" which to be intelligently discussed needs some explanation on my part. Since the Wassermann reaction and salvarsan have been introduced the treatment of syphilis has been put on a more exact, scientific and accurate basis. I believe this to be true for a large per cent. of early infections but, unfortunately, for a very small per cent. of late cases. All of us have had brilliant results in the treatment of the initial stages of syphilis with mercury and salvarsan. If we had had the Wassermann test years ago and had treated the early stages of syphilis as intensely with mercury as we do now with salvarsan and mercury, it is highly probable we would have had equally brilliant results. A certain per cent. of early syphilis, even under the most intensive treatment, goes on to the latent stage; that is, the host, in spite of the most intensive treatment is not freed of his parasite. This inference is assumed because in these cases the Wassermann reaction remains positive in various degrees no matter what treatment may be instituted. All syphilographers are called on to treat those who give no other objective or subjective symptoms of syphilis but a positive Wassermann reaction. Many of these are clinically, as far as modern clinical methods go, free from any symptoms of the disease. In other words, they are asymptomatic syphilitics, and these are the cases which should make us "pause, look and listen." I believe

the medical world, particularly our syphilographers and some of our neurologists, are treating these "latent" cases in an intensive manner with a severe routine that has not been cautiously analyzed. No conclusions can properly be drawn without investigation in large numbers.

Three phases confront us in the discussion of this subject: first, the relation of an asymptomatic syphilitic to his infection; second, the result of intensive routine treatment in the latent syphilitic; third, should all so-called latent syphilitics be placed on the same basis?

We all know that it is impossible in a relatively large number of latent syphilitics, even after the most intensive treatment, to obtain a negative Wassermann reaction that will stick.

All of us realize the probable importance of the work of Warthin, who has found spirocheta in the heart muscles, testicles and other organs in "cured" syphilitics and in the asymptomatic syphilitics. These nests or bunches lie in an area that seems to be only slightly changed by the organisms. We know the insidiousness of syphilis, but is it wise always to break down with treatment the symbiotic plaques in the latent syphilitic? Can we be sure of killing all the organisms when we break them down or open them up by treatment? If we could be sure of this result, then there would be no argument. But the spirocheta pallida probably have a life cycle and certain resisting stages. If this were not true then salvarsan and mercury, comparatively speaking, is a failure as a spirocheticide, which is taught us by the clinical results obtained in a certain per cent. of infections where the Wassermann reaction remains positive in spite of treatment. Evidently in many cases our modern treatment does not affect these organisms. They either become "fast" to the remedies or have a resisting form. I have seen, and I am sure others have seen, dire results follow the treatment of certain asymptomatic syphilitics. I have seen hemiplegia follow shortly after the beginning of intensive treatment, and also after the so-called provoc-

\* Read at the meeting of the St. Louis Medical Society, Nov. 18, 1916.

ative injection. I have seen several asymptomatic syphilitics, who have insisted on treatment, backed up by their physician on account of a two plus Wassermann, go gradually into a cerebral spinal lues under intensive treatment, whereas before treatment they were clinically, objectively, and subjectively free from any symptoms. Two such patients had a negative spinal fluid before the beginning of his treatment.

Of course we must consider the fact that these individuals might have had cerebrospinal manifestations more severely or earlier if treatment had not been instituted, but knowing the pathology of syphilis and the literature of the subject we must pause and think of the relationship between the spirocheta, the host, and our present methods.

If we had a blood test similar to the Wassermann for tuberculosis it might be positive in a large per cent. of individuals. This might apply to many other infectious diseases. We should not become therapeutically hysterical over the fact that isolated foci of spirocheta are found in the human body. All life will show in their adult forms and particularly in their old forms the scars of disease. This is beautifully shown, as pointed out by Von Schrenk, by the old trees of the delta of California which have lived from 800 to 1,000 years, their bodies showing on dissection many isolated foci and scars of many and many infectious diseases common to trees. The body of an apparently healthy old man of eighty is a magnificent example of the struggle for existence in relation to pathology.

In the discussion of the subject, we must exclude the latent syphilitic woman who is in a child-bearing period because we know that she must now and then have spirocheta in her general circulation, and that they may be wafted into the placenta which, as new epiblastic tissue, offers a virgin field for the growth of the organism. The spirocheta is essentially an epiblastic parasite and under such circumstances every available method should be used to destroy them or suppress their growth in the latent asymptomatic syphilitic in the child-bearing period.

I would like to see the discussion limited absolutely to the subject, bearing in mind the facts relative to it. Please do not wander off into the relative value of mercury and salvarsan, whether paresis or tabes should be treated with salvarsan or not, or the value of salvarsan in tabes or paresis. The proposition before us is, should the asymptomatic syphilitic be treated, or how shall the asymptomatic syphilitic be treated?

Wall Building.

#### DISCUSSION

DR. WILLIAM A. PUSEY, Chicago: Men who have had to treat syphilis in the last few years, who thought of their work and analyzed their cases as Dr. Engman has done, have had an exceedingly difficult problem to face. The authority for salvarsan is so high, the insistence on its virtues is so great and comes from such important sources, that it has required more than ordinary restraint to be conservative in its use and to resist the impulse to give it without question in the way its first enthusiasts advised and its present advocates still insist on. I have listened to Dr. Engman's paper as to a cry from the wilderness. I did not know there was anybody, except myself, who was so conservative and who was willing to ask such questions about salvarsan.

There are unsolved problems in regard to the use of salvarsan which are of the deepest importance, and one of them is the proposition that Dr. Engman has propounded tonight. In considering this question we can best get our bearings by reverting briefly to what happened in the early period of syphilis in the old days, and what happens now.

In the old days before we became excited about syphilis, when we saw our patients in early syphilis we gave them mercury, and we treated them as patients whose resistance was to be built up, and whose health was to be protected in every way possible; and the course of the disease in these patients was this—I am speaking now of decent people who had decent attention—the patients became symptomatically well for all practical purposes. Perhaps they had a few recurrences of mucous patches during the first year of the disease, but as a rule they only knew they had syphilis from memory; the treatment of syphilis during these early years was one of the easiest problems we had to handle. And study of these cases within recent years, since we have had the Wassermann, has shown that many of these patients became Wassermann-negative, and many of them I can testify from occasional Wassermans extending over several years, have remained Wassermann-negative to the present. Many of them did not become Wassermann-negative. They have remained Wassermann-positive, and they would have gone on living out their life in blissful ignorance of the fact that they had syphilis if no Wassermann test had come along to remind them of it. These patients treated with mercury in the old days unquestionably developed, either of themselves or through the help of mercury, a considerable resistance to syphilis.

Now what happens since we have had salvarsan? If we can get hold of our patients within ten days after the appearance of the



chancre, before there has been a generalization of syphilis, before there is adenopathy and before the Wassermann becomes positive—and since we have been able to demonstrate the spirochete we have been able to recognize syphilis thus early—conservative men all over the world believe that these patients can be rendered permanently Wassermann-negative, using the word “permanently” to mean as long as these cases have now been under observation. That is the golden opportunity in syphilis. These patients are rendered harmless to others almost immediately, and with vigorous specific treatment begun at that time—I mean salvarsan and mercury—they never become Wassermann positive and there is good reason to believe that they are cured. But experience has also shown that after this golden opportunity has passed, the prospect of curing these patients—of making them permanently symptom-free and Wassermann-negative—becomes increasingly difficult, not only from month to month, but from week to week. The patient that we first see four or five weeks after he has had syphilis is not nearly so sure of being cured as the patient who is seen in the first ten days; and as weeks pass into months the difficulty of cure increases until, when we see patients only after syphilis has become thoroughly generalized, after they have had a spirochete septicemia, no one can give positive assurance that these patients can be symptomatically cured and made permanently Wassermann-negative. If we are honest with ourselves and careful in following our cases, I believe that conclusion is forced in on us.

And there is one other face, aside from the failure to cure, which is unpleasant in these salvarsan treated cases, and that is the increased tendency which these patients show to early gummatous lesions. Some men now, even among salvarsan advocates, hold that unless you can crowd salvarsan to the limit, and mercury to the limit, over repeated periods of time, nothing is gained by the use of salvarsan in early syphilis; for experience has shown that these patients treated with salvarsan early, but short of cure, have more relapses than the patients treated without salvarsan. When that first became apparent, the fact was denied by salvarsan enthusiasts, and it was maintained that these recurrences had simply been overlooked before. And Benario, one of Ehrlich's disciples, with enthusiastic loyalty, compiled a book to show that the nervous recurrences, the “neuro-recidives,” as Ehrlich called them, were not more frequent with salvarsan than before it was introduced. But Ehrlich himself came to acknowledge that these early recurrences were more frequent in the uncured cases treated with salvarsan than in cases treated with mercury alone, and Ehrlich offered what is

probably the true explanation of the fact. Ehrlich's explanation is this: The patient who has had salvarsan early in his syphilis but not to the point of cure has almost all of his spirochetes destroyed. Certain foci, however, remain. The case does not go on to develop a general spirochete infection and with it a certain immunity to syphilis. He is left still infected, but he has not the stimulus of a sudden general infection to make him develop a natural resistance to syphilis. He remains in this happy condition of apparent cure for a short time but at the expense of failing to develop a capacity to fight the infection of syphilis that he would have gained if the infection had pursued its natural course. Then suddenly a focus of infection becomes active and it runs riot in its course—produces a destructive lesion, such as we were in the habit of seeing only late in syphilis, because the patient has developed no natural immunity to the disease.

In this consideration of the course of syphilis under mercury alone, and under salvarsan and mercury, two points stand out. One is that the syphilitic in the old days, even if he had no mercury, and certainly if he had good treatment, developed in most cases a very considerable resistance to the spirochetal infection—a certain capacity of the tissues to take care of themselves in the fight against the disease. That, I take it, means that he developed—not a permanent condition of antibody excess—but a capacity for developing antibodies on demand, and that capacity once developed could be excited to vigorous action whenever occasion demanded. It is this acquired capacity to produce overwhelming amounts of antistances which explains the immunity of patients from second attacks of smallpox and many other infectious diseases. And it is the same sort of capacity which has protected the syphilitic in the past from annihilation by his disease.

The second point is that the case treated early with salvarsan, but short of cure, lacks that valuable faculty. He does not have the early stimulus that calls on the tissues to develop to the highest degree their natural capacity to take care of the infection. Now this does not mean that salvarsan should not be given in early syphilis but it does mean that, if it is given in very early syphilis, it should be given so vigorously that we may have reasonable hope of complete cure; that if complete sterilization is not produced the patient's prospects of immunity from further syphilis are not so good as if he had had no salvarsan.

So much for the early course of syphilis. The proposition which Dr. Engman puts before us is this: What are we going to do about the individual who had syphilis several years ago; who is free from symptoms; is apparently well

as far as syphilis goes but has a positive Wassermann? Dr. Engman asks, what are we going to do about this positive Wassermann? To put it more directly, I should say what can we do about it? If we cannot make the Wassermann permanently negative with almost unvarying regularity in patients who have had their syphilis only a few months, what show have we of doing this in patients in whom the disease has existed for years. Experience has shown that the Wassermann in these cases cannot be made permanently negative. And salvarsan and mercury cannot be poured into these people as though they were simply chemical retorts without the risk of serious damage. Anyone who has seen the straits to which late cases have been reduced in the attempt to make them Wassermann-negative must feel the importance of this fact. If then you cannot have reasonable chances of making their Wassermann negative and if you are apt to do them serious temporary if not permanent damage in the attempt to make it negative—if these things are true, and I believe they are—the answer to Dr. Engman's question seems to be given. We would better leave out of consideration the Wassermann as a guide to management of these cases. Now this may not be a proud situation to acknowledge, but I take it that what we are after is facts—guidance in the management of our cases, and not a bolster for our pride.

What is the prospect for the man who is apparently well but has a positive Wassermann from a syphilis contracted many years ago? On the basis of his positive Wassermann he presumably has syphilis, but I would point out that all we can say on the basis of the positive Wassermann alone is that he presumably has active syphilis. We cannot say with scientific accuracy that he positively has active syphilis. He has had active syphilis but whether it is still active or not is at least in part presumptive.

As I said before, what is going to happen to this man with the late latent syphilis—accepting the fact that his Wassermann means that he has actual syphilis? There are two sorts of accidents that can happen to him. He may have a frank gumma in any tissue in his body, or he may have a chronic sclerotic process, which does not differ essentially from the other type of lesion except in the sort of tissue that it occurs in. This process may involve the vascular system or the nervous system. If he should have the first sort of accident, if he has a frank gumma, even if he has a cerebral endarteritis or a gumma of the brain, the chances are very strong that he can be rescued without serious damage to him, provided we know he has syphilis, recognize the trouble, and treat it promptly and vigorously. If he gets the chronic sclerotic processes in the vascular sys-

tem or in the nervous system treatment in the old way even may do some good, but it has not been shown that any sort of treatment can permanently stop these vascular or nervous processes. Certainly it has not been established that we are capable of producing radical cure in these cases in the central nervous system.

This man's chances, however, of going through life with reasonable peace and comfort are not bad. In the first place—and this should be forced home in our present state of excitement—this man can have healthy children. He is not absolutely sure of having normal children—no one can be sure of that—but we can tell him, providing his syphilis is several years old and he has had several years of immunity from symptoms, that he can have healthy children regardless of whether he has a positive Wassermann or a negative Wassermann. We have been using that rule since the days of Fournier and it is eminently justified by results. The men with the old latent syphilis have healthy children. The exception is so rare that I can say that I have not seen it in my experience and I have seen scores of such men marry and have families.

The lives of these men are going to be shortened a little. The effect of syphilis on the vascular system is its most insidious and probably its most damaging effect in shortening life. I had occasion a year or two ago to look up the effect of syphilis on longevity in the report of the Association of Life Insurance Medical Directors and the Actuarial Society of America in whose tables syphilitic cases running into the tens of thousands are tabulated; and their tables show that these syphilitic risks have, roughly estimating it, about five years less expectancy than the normal individual. The syphilitic risk is more apt to be intemperate and to have other factors as well as syphilis that damage his expectancy, but we will admit that his reduced expectancy is all due to syphilis. Assuming that this is true, if the syphilitic can be reasonably healthy and can escape with five years less of life, I believe we can find no justification in that fact for using heroic methods that are not free from danger in the effort to free him from his latent syphilis.

But there is one danger that the latent syphilitic cannot get away from, and that is the possibility of tabes and paresis. These cases come, and unfortunately in the present state of our art we cannot get away from them. If there were good reason to believe that, by the most intensive use of salvarsan and mercury in the late latent cases, we could get rid of the dangers of paresis and tabes, the effort to do so might well claim justification. But in the present state of our knowledge no man is justified in saying that we can do this.



Unfortunately, the man who has this old latent syphilis will probably have it as long as he lives, but, as Dr. Engman has stated, while that statement sounds bad it does not represent a peculiar situation. Nearly all of us carry tuberculosis and pneumococcus infection and colon bacillus infections, and we are all gradually going with arteriosclerosis; and the man who has latent syphilis and has it localized in some inactive lesion, while he has an unpleasant memory, is not surely going to have an unhappy ending. I think it is mighty important to emphasize this fact since at the present time there is a real hysteria about syphilis.

I literally am telling the truth when I say that I would rather have syphilis than be one of many cases of syphilophobia that I have seen in the last five years. And I am ready to believe that, if all these people have syphilis of the testicle and of the adrenals that Dr. Warthin is finding, it is of trivial importance—a matter of academic interest rather than of practical importance. They certainly have no interference with the functions of the testicles; they propagate and they have healthy children. And symptoms of syphilitic adrenal disease is, I believe, a very rare occurrence among them. I believe we can say from our clinical experience, and it is the sane attitude to assume, that the apparently healthy man even with a positive Wassermann will in the majority of cases be able to live out his life in peace and comfort. He is in vastly less danger of a premature, unhappy end than the man who has once had clinical tuberculosis. He has a small risk of late nervous syphilis which cannot be controlled, but this risk is small. I do not believe the late nervous accidents occur once in two hundred cases among the syphilitics who lead sane, decent lives. At the present time we have no way of getting rid of this risk, and until we are in a position to be sure of doing more for these cases than we can do now—until we are sure of not doing them harm—we have got to be content with that situation.

DR. M. A. BLISS: I have had paretics with a negative Wassermann, both of the blood and of the fluid, and with a cell count of 3, die. I have seen paretics treated with all of the modern salvarsan therapy, reinforced by mercurial injections, attain a negative Wassermann, and they died; and what good is a negative Wassermann to a dead man?

Now one of the reasons that Dr. Engman asked me to take part in this discussion is this: We have seen together, and we have known of a number of cases of latent syphilis in which treatment or activation for the purpose of bringing on a Wassermann has resulted apparently in disaster for that patient. I have records of three in whom an activation treatment,

consisting of some injections of mercury, resulted apparently in hemiplegia.

For a long time I have not depended on Wassermann reactions at all as regards treatment. The Wassermann may guide us in diagnosis and it may help us in clearing up some obscure situations but in my field it is rare that I want a Wassermann. The clinical signs that I can see are just as plain to me as any Wassermann could possibly be. I feel that there is a good deal of what Dr. Engman and Dr. Pusey have called hysteria on the subject of the Wassermann. Recently one of my colleagues expressed my feeling on the subject when he said: "If personally I was doomed to have syphilis, I would prefer to possess pretty much all the time a four-plus Wassermann."

DR. WILLIAM ELDER: A few years ago I had the privilege of reading a paper here on the question of the Wassermann reaction in its relation to diagnostic as well as therapeutic use. I said at that time that I thought the syphilitic should be treated with as much mercury as he would tolerate over as long a time as he would take it. I have not changed my opinion.

To take up Warthin's work in a statistical way, a little: out of 25 cases that showed no clinical signs of syphilis, that syphilis was not suspected, and that came to the post mortem table, in 10 no Wassermann was done because there was no suspicion of lues; in 15 Wassermann was done, 10 being negative, 3 positive, 2 at first negative and subsequently positive. All were pathologically luetic. Almost every one of them in the male showed syphilis of the testicle. I do not agree with Dr. Pusey that syphilis of the testicle is irrelevant to a man's health. I do not believe that it is irrelevant to the public health. Certainly, if there is any way to transmit lues it would be through syphilis of the testicle, and to turn these men loose without any treatment whether their Wassermann be positive or negative, would not be practicing prophylactic medicine.

We have heard that accidents have happened. I feel convinced, despite what Dr. Engman has said, that if he had gotten these patients probably three months earlier and treated them with his salvarsan or his mercury, maybe they would not have gotten that hemiplegia.

Finally, the question of prophylaxis is very important. Thirty-one of the cases reported by Warthin, out of a possible thirty-seven, showed involvement of the testicle. To send these men out as cured is wrong; we ought to treat them for the simple purpose, if no other, of preventing their progeny and their wives, or other women that they come in contact with, from acquiring the disease.

DR. FRANK R. FRY: It is very obvious that the "intensive" treatment is accomplishing some

good; it is educating the medical profession in the direction of its limitations in treating syphilis. It is yet questionable what it is doing for the cure of syphilis; that is, as a broad and general proposition; less of a question as to what it accomplishes in the early stages of the infection perhaps, but very questionable what is to be the status of salvarsan in the later stages. I remember some years ago reading something from Pederson, the distinguished syphilographer, to the effect that it would take at least twenty years to establish any reliable conclusions as to what the value of salvarsan is to be finally; and we may say now that five years of that time is past and we have fifteen years still to work on that single proposition.

As to the more practical portion of our subject, namely, what are we to do with the general run of syphilitic cases that come to us? Over three years and a half ago I read a paper in which I took some pains to attempt to formulate a proposition concerning mercury that could be presented to a general medical audience that wanted to have something stated as nearly specifically as possible, and I wrote into that paper this: "For example, suppose we have treated a patient for several years and given several hundred doses of mercury in approved fashion. How now are we to decide when there has been a sufficiency? Certainly not by the absence of clinical manifestations, nor by the showings of the Wassermann test. In fact, we have no test. Meantime, what? I would answer, as I have repeatedly answered before, give mercury in every instance as long as you can and as much as you can *conscientiously*. Let us emphasize this advice by taking it literally. Our syphilitic patients are notoriously inconstant. Only a small proportion of them take treatment as long as we try to advise them to do. We find only a few instances of actually satisfactory trials of treatment, but when we do have them with us for five, ten, fifteen years, we should honor their constancy by continuing to treat them faithfully."

In another paragraph of the same paper I say: "In attempting to regulate this detail, I know only one suggestion, the one already made, to give all we can conscientiously, to acquaint ourselves conscientiously with the condition of every patient to whom we would attempt to administer the drug, to maintain conscientiously this acquaintance as we proceed and to study conscientiously the effect of practically every dose. How otherwise are we to form any idea of how much to give?"

I think we may regulate the use of our salvarsan today on much the same basis. It is a matter of conscientious carefulness. For instance, who is to determine when a syphilitic patient is asymptomatic? The dermatologist can tell as far as he is able to go; the neuro-

logist as far as he is able to go; the internist as far as he is able to go. That is what the conscientious study of the patient means, and it seems to me that unless we have some warrant, some guaranty which we have not yet attained, that the patient is free from symptoms of all kinds, we are not warranted in discontinuing treatment no matter how old the infection has been.

I am very glad that this audience has an opportunity to hear from authoritative sources, in the opening address, the attitude that I believe we are all now rapidly falling into, namely, that the so-called "intensive" treatment of syphilis has been "hysterical." We must get away from it and back to our senses in as dignified a way as we can.

DR. WM. W. GRAVES: At the present time the Wassermann reaction occupies a unique place in medical thought and practice. It has revealed the presence of syphilis when least suspected by the physician and has thus paved the way for the relief of untold suffering. It has shown the great frequency of infection in apparently healthy wives and progeny of syphilitics and the inadequacy of our so-called cures. It has brought with it convincing knowledge to the many, formerly appreciated only by the few, that syphilis is a chronic infectious disease persisting throughout the lives of the majority of infected individuals. It has, indeed, become a diagnostic aid of the greatest value, and herein lies its usefulness in clinical medicine.

That the Wassermann reaction may occur in a few individuals who have never had a syphilitic infection; that it occurs in other diseases than syphilis; that it is not present in every case in any period of the disease; that it is not infrequently negative in the presence of active syphilitic manifestations; that like some of the other signs of syphilis, the Wassermann reaction is variable—at times present, at times absent, and this too independent of treatment—and that it is certainly influenced by alcohol and probably by other drugs or conditions, are sufficient reasons for using it in the clinic only as an aid in diagnosis and never as the sole indication for treatment.

Most men, however, are not content to use the Wassermann reaction only in the recognition of syphilitics, but it has become for them the chief indication and guide in treatment. To such an extent has the positive Wassermann reaction become a positive indication for treatment that it would seem we are in danger of losing sight of the individual and his disease in our zeal to convert a positive into a negative Wassermann reaction. The trend of medical practice in this direction was doubtless recognized by Dr. Engman when he proposed for discussion by this society the question, "Should



the Asymptomatic Individual with a Positive Wassermann Be Treated?" Without a study of the individual I could not attempt to answer Dr. Engman's question. I shall, therefore, limit my remarks to a few of the general principles underlying the treatment of syphilis and to the teaching of clinical experience in this disease.

Recognizing an individual to be a syphilitic, the question naturally arises, how shall we treat him and over what period of time. Shall we base our therapy as in other diseases on knowledge of the individual's health and disease tendencies as disclosed by a study of his family history, his own life, his environment, his habits, his occupation and on the sum total of his physical condition? Or shall we base it alone on the knowledge that he has syphilis, gives a four plus Wassermann, and proceed to treat him with our so-called specifics until the provocative Wassermann is repeatedly negative?

There is no denying the fact that the present-day plan of most men in the treatment of syphilis has a definite object in view—the certain cure of the disease—and in carrying out this plan to the bitter end the syphilitic himself is often lost to view. As a profession we are wedded to the idea of the curability of syphilis by chemical means and never before were we so firmly convinced of our powers as in recent years. Do we not see the most distressing conditions due to syphilitic infection yield as if by magic to our therapy? Do we not see most individuals we have treated thoroughly lead ever after apparently useful and healthful lives? Do we not see them marry and become fathers of seemingly normal children? Certainly these questions must be answered in the affirmative. Are we not then justified in believing in our ability to cure the disease? Let us turn to the teaching of clinical experience for the answer to this question.

Few of us have had the temerity to study critically the life history of our syphilitic patients or to follow them in a clinical way from year to year after carrying them through the early years of infection or even to consider the possibility of infection in consorts and progeny if they, too, are apparently healthy. Believing in our cures and resting content in the presence of apparent good health or in the absence of active local, focal or so-called para manifestations, we come to regard the one time known to be syphilitic cured and he is thereafter for many physicians no longer the object of medical observation and study.

I am one of those who hold to the principle that a known syphilitic should be the subject of medical observation and study throughout his natural life. My reasons for believing in

this principle are that clinical experience teaches that no organ or tissue is exempt from the manifestations of syphilis; that its frank manifestations may recur or occur at any time during the life of the infected individual; that its more subtle physical signs such as cardiac or vascular changes, alterations in reflexes, sensation and pupils, pallor and pigmentations, develop insidiously in many syphilitics in the course of years after infection with or without definite subjective complaint; that the study of the life history of most syphilitics shows that they are incapable of reacting in a normal manner to the stresses and strains of existence and that many of them have subjective symptoms which can often be interpreted as recurring constitutional manifestations; that because syphilis is a chronic infectious disease most subjects of infection are ever afterward individuals of lowered resistance; that not a few syphilitics are potentially either paretics or tabetics; that a large percentage of apparently healthy syphilitics, however thoroughly we have treated them, show a positive Wassermann reaction when sufficient time has elapsed after specific treatment and that we have no definite means of knowing when the one time infected individual is free from his infection save by a successful reinfection.

Surely these should be sufficient reasons for keeping the known to be syphilitic under observation and study throughout his natural life. This principle will meet with many objections, chief of which will be that such concern on our part about syphilitics will unnecessarily alarm patients and make many of them syphilophobes. We do not hesitate, however, to educate our tubercular patients, or to speak frankly to the individual about his organic heart disease, or to keep the chronic nephritic under constant observation, or to be solicitous about the patient with diabetic symptoms, and our frankness in such conditions leads only to good because we thereby secure the earnest cooperation on the part of such patients. Then why should we be less frank with our syphilitics or less solicitous about them when all clinical experience teaches that we are dealing with an infection in many individuals which can be compared with no other infection in its duration save leprosy? The answer is that our therapeutic triumphs blind us to the teachings of clinical experience.

Just a word in conclusion, in reference to therapeutic principles. No man can deny the wonderful results of our so-called specifics in the prompt relief of some of the manifestations of syphilis; but let us not be so bold as to interpret these results as other than symptomatic cures. The prompt relief of syphilitic symptoms and the natural history of treated as well as untreated syphilis should convince

us that the same mechanisms of defense are at work in the human organism in the presence of a syphilitic infection as in other infections and that our remedies do not act directly as spirocheticides and sterilizers but rather as stimulators of the defensive mechanisms inherent in the host.

With such conceptions to guide us we shall find more to do for the syphilitic than trying to convert his positive Wassermann into a negative Wassermann—we shall think more about the individual and less about his infection; more about strengthening his inherent resistances to the virus or increasing his tolerance for it and less about curing him. When our profession becomes less certain of its cures of syphilis, a brighter day will surely dawn for the syphilitic.

DR. JOSEPH GRINDON: It seems to me that Dr Fry touched on the most pregnant points connected with this discussion when he said that in perhaps fifteen years from now we would be better able to discuss this matter than we can today. That, it seems to me, is the chief difficulty about this discussion; we are not yet in possession of the facts, and although an attempt to determine as nearly as possible what is the truth is most praiseworthy, inasmuch as our patients cannot afford to wait fifteen years for us to arrive at a conclusion, yet such an attempt, while it may not be unproductive of good, will still remain inconclusive.

Another point, merely touched on by Dr. Fry and briefly alluded to by Dr. Graves, is, I think, a most important one: How can we consider the question, "Shall the asymptomatic syphilitic be treated?" when perhaps no two of us would agree on who is an asymptomatic syphilitic? I am not sure that there are any asymptomatic syphilitics. To say that a man has a gumma, that he has no eruption, that he is not parietic or tabetic, is not to say that he is asymptomatic. How many cases of obscure intractable dyspepsia, how many cases of intestinal disturbance of one sort or another, how many cases of lowered general nutrition, of anemia or of emaciation otherwise accounted for, are really syphilitic? I believe that the person presenting such symptoms, or, say, the individual with hardening arteries, is not asymptomatic; his symptoms are not of the gross sort, but they are discoverable. Shall we treat these individuals? I would say, decidedly, yes.

What shall be the guide for treatment? We have the Wassermann. Now as to its value—a brief digression. It is true that there are certain other conditions which we seldom or never meet here, which will yield a positive Wassermann. Whereas, a negative Wassermann, we will admit, is not conclusive, a posi-

tive Wassermann done by men in whose competence and integrity I have full confidence, has not led me astray in all these years since the Wassermann came into use. I have had persons whom I knew were gravely affected with lues give a negative Wassermann, a very few of them. I have not seen a positive Wassermann in an individual whom I did not believe had syphilis.

Take the case of Colles' woman. She is assumed to be asymptomatic. Shall she be treated? Statistics show that a large proportion of these Colles' women ultimately become tabetic or parietic. The question to my mind is not shall the asymptomatic syphilitic be treated; but *how* shall the asymptomatic syphilitic be treated? As it was put by Dr. Pusey, how *can* the asymptomatic syphilitic be treated? It is not a practicable thing even were it desirable to go on giving salvarsan indefinitely. There is a time when we must come to some sort of an understanding with the patient and with ourselves, with our own conscience, in the matter. Statistics show that in early syphilis a combined mercury and salvarsan treatment gives the best results. If in early syphilis, why not in late syphilis? We no longer make a sharp distinction between early, late and latent syphilis. We understand clearly today that it is all syphilis, and therefore I believe that we should give a number of doses of salvarsan—I do not know how many, perhaps I shall fifteen years from now—after all symptoms have disappeared, and with it mercury, and *then* mercury for as long as the patient will consent to take it and continues to present a positive Wassermann. I have practical justification for so doing; namely, that I see individuals whom we would generally call "asymptomatic" individuals with lowered general nutrition, which we cannot clearly attribute to syphilis, very greatly improve under active treatment so that after a year we will say, without convincing symptoms, perhaps with a half dozen salvarsans, and a great deal of mercury they will be in much better health than before, and will say, "I have not felt so well in many a long year." Now, that some patients have after such treatment developed grave nervous lesions, such as those Dr. Bliss and Dr. Engman spoke of, to my mind proves very little. The question is, how many more would have presented such symptoms if they had not had salvarsan and mercury?

The remark that, when by the use of salvarsan we succeed in converting a positive into a negative Wassermann, or a two or three-plus positive into a one-plus positive, we are thereby lowering the natural resistance by destroying antibodies, does not impress me because we do not know what the Wassermann body is. The reaction is not a true antigen-antibody reaction.



We do not know that the Wassermann body is an antibody at all. We do not know that it is by virtue of the presence of the Wassermann body that the organism combats the disease. There is some reason to believe that it consists of two parts, one, an antibody, and the other a product of tissue degeneration.

So, for my part, I do not see any hysteria in continuing to give our patient all the protection we possibly can. I believe that he should be treated as long as he lives and gives a positive Wassermann, but I do not believe that he should be treated with equal intensity for all of that time; I believe that it would be wiser, after a certain course of intensive treatment, to use such treatment as Dr. Fry advocates; that is, the mercurials.

DR. PHILIP C. JEANS: What I have to say is largely concerned with the hereditary infection.

It is evident that there are many phases to the discussion of this question, and though we have many theories there are few facts on which to base an intelligent argument. The idea of the spirochete becoming mercury-fast as the result of treatment is far from a proven fact clinically, and has been shown not to be a fact *in vitro*. The possible retention in the body of Wassermann bodies after the cure of the disease is not only unproved but it is unlikely on theoretical grounds. Between the early and the late manifestations of hereditary syphilis as well as at other stages there occurs a latent period in which there may be no stigmata whatever; the child may be above the average in mental and physical development, and the only evidence of a persisting infection may be a positive Wassermann reaction. The patients to whom I refer are those who usually have had no treatment or very little previous treatment.

The question, whether such a patient should be treated or whether we should withhold medication until some active manifestation presents itself, assumes especial importance when the spinal fluid gives a positive Wassermann reaction. When certain nervous disorders, such as paresis, can be diagnosed clinically we know that the process has been active for years and at such a late stage very little or nothing can be done to help the patient. Shall we wait until the patient acquires this hopeless state, only to reproach ourselves that the treatment was not begun when something might be accomplished? It might be argued that some of these Wassermann-positive individuals might live out their lives without showing active manifestations, but who knows this to be a fact? Those who have given much study to this disease find manifestations of hereditary infection even in the sixth and seventh decades. What harm comes from the intensive treatment of an

asymptomatic individual, who the next month or the next year is likely to give clinical instead of chemical evidence of a spirochetal activity? The consensus of opinion is, I think, that a Wassermann reaction is an expression of activity on the part of the spirochete, and for this reason it seems advisable to carry out the treatment just as if a clinical manifestation were present.

We have treated rather a large number of children with latent hereditary infection, and the only ill effect observed has been the occasional onset of an interstitial keratitis shortly after beginning intensive treatment, which was comparable to the aggravation under intensive treatment of an interstitial keratitis that had already begun. In spite of this unpleasant complication we still believe that in the latent stage a patient should be treated. The very fact that this complication occurs may be considered as proof of a potential lesion not yet manifest, and it is probable that it would become manifest later without treatment. I have seen no other ill effect from such treatment.

A very large group of Wassermann-positive individuals, already referred to, is to be found among the mothers of syphilitic children. Some of these in our small group have later shown manifestations of the disease and, no doubt, if they were followed longer many more would show manifestations later.

We observe only the things that we are trained to observe. Are we sure that in an asymptomatic individual there is no active process? Do we make a practice of observing for optic neuritis, choroiditis, loss of sensation, spinal fluid changes, and other easily overlooked phenomena. Whatever opinion may be held by syphilographers in regard to the treatment of latent syphilis there can be no doubt of the advisability of treating the mother of a syphilitic child if she again becomes pregnant. There is a great probability that the child will be born with the disease if she is not treated and every assurance that he will be born healthy if the mother is treated from the first recognition of pregnancy. In numerous families studied the only breaks in a long line of syphilitic children have been a healthy child whose mother received treatment during her pregnancy; the children of subsequent pregnancies have again been diseased.

DR. W. H. MOOK: I think we all agree that the Wassermann-positive patient, in most cases, has had syphilis, whether he presents symptoms or not. On the discovery of a positive Wassermann the majority of the patients themselves will demand treatment immediately in spite of all arguments to the contrary. The question, "Should the Asymptomatic Individual with a

Positive Wassermann Be Treated?" suggests, of course, as Dr. Graves has said, that every case should be studied from the individual standpoint, and that at some time or other he is going to have or will require treatment. Now the main thing is, what might we do with our treatment? We must bear in mind the dangers of treatment. We all know that salvarsan and mercury may produce nephritis, mild or severe, and nephritis that does not get well. It is a question that we have to decide when the patient presents himself, whether he is advanced too far in years, whether it is wise to give antisyphilitic treatment intensively or otherwise; and I concur with Dr. Pusey and Dr. Engman that not all of them should be put on antisyphilitic treatment immediately on the discovery of a positive Wassermann reaction. He should be carefully studied from all standing points. If you are going to shoot at a negative Wassermann and keep on shooting at a negative Wassermann you are liable to kill the patient that is holding the target. I believe, of course, that syphilitics should be treated, and most of them should be treated intensively, but certainly not to the extent for the production of a negative reaction in all cases. I think it will take a good many years for us to decide the question of what a negative Wassermann reaction really means in former syphilitics.

DR. LOUIS H. BEHRENS: The treatment required in the asymptomatic syphilitic has to me been a serious question, and I must confess that I have rather hesitated in giving any medicine and keeping my patient under observation for any untoward symptoms.

We have heard much this evening on Wassermann positives and negatives. True, the Wassermann with a proper history of syphilitic infection and its secondaries is an invaluable agent in diagnosis, but as indicative of the status of syphilitic activity I should like again to be enlightened as to its significance. Recently a nonsymptomatic, without any history of infection or secondaries, came to my office, who thirty-five years ago was told by his doctor after a short guess-like examination, that he had lues and was put under four or six weeks of pills. His blood showed, March, 1914, a four-plus. After a salvarsan and mercury injection for two courses, his blood is still four-plus. He is a perfect specimen, near 60, active business man. Is he a subject for treatment or to be let alone?

Dr. Seabold, who is in my office, recently had a salvarsan phobian apply for examination and injection, saying in three years he had received twenty-four salvarsans with other treatment and was still four-plus. He seemed symptom free. He was advised to stop treatment and keep under observation. Was such

advice proper? It is evident the Wassermanns were treated in his case.

For many years many nonsympathetic syphilitic negroes were seen in my clinic with scars of initial infection. Dr. Engman's clinic was adjoining mine and held at the same hour. How seldom we see a tabetic negro, yet McNeil of Galveston recently made Wassermanns on negroes admitted to the hospital irrespective of their disease and found over 40 per cent. positive Wassermann in varied plus. Are we or are we not in many instances overdosing our old nonsymptomatic cases and stirring up conditions that are quiescent?

Patients with syphilis are getting wiser than formerly and are getting chaotic, and shop from one to another doctor, gathering wisdom. The advice and criticism of the other doctor's treatment creates a dangerous condition, or syphilophobia, and much resentment towards the other doctor.

DR. AMAND RAVOLD: May I place on the blackboard the most remarkable and interesting statistics with which I am acquainted, on the after-life-time of syphilitics and make a few remarks about them? The Medico-Actuarial Mortality Investigation has recently completed and published a study of the experiences of the oldest and largest insurance companies of this country, comparing the actual deaths in insured syphilitics with the expected deaths, the expected deaths being calculated from the medico-actuarial table based on standard lives during the years 1855 to 1908 inclusive. The cases are divided into three groups and include only those in which the attack of syphilis occurred at least three years before the date of the application for insurance.

TABLE I

Syphilis surely, thoroughly treated; two years continuous treatment and one year freedom from symptoms.

	Per Cent.
Rates of Actual to Expected Deaths	
Between three and five years' application. . .	139
Between five and ten years of application. . .	174
More than ten years prior to application. . .	217

TABLE II

Syphilis surely. Not thoroughly treated, or no details of treatment given.

	Per Cent.
Rates of Actual to Expected Deaths	
Between three and five years of application	284
Between five and ten years of application. . .	212
More than ten years prior to application. . .	129

The third table, syphilis doubtful, does not interest us.



The figures are per cent. and were obtained by dividing the actual deaths in each case by the expected deaths. In studying these tables we must keep in mind the fact that we are here dealing with selected risks in syphilitic subjects. That no insurance company under any circumstance would think of issuing a policy to an acknowledged syphilitic unless he was free of all signs and symptoms of the disease and to all appearances a well man. Note that in Table I the effect of the so-called thorough treatment was of short duration and that the farther removed in time from the period of treatment the more surprisingly rapid the increase in the death rate. This I believe warrants the conclusion that the applicants, believing themselves cured of the disease, received no subsequent treatment. However, when we compare Table I and Table II we really note the benefit of the so-called "thorough treatment" in the early years of the disease. In Table I in the three to five year period we have a death percentage of 139, while during the same period in Table II "not thoroughly treated" we see the appalling per cent. of 284; over twice as great. I know of no statistics which speak so eloquently as these for the thorough treatment of syphilis and both tables show the absolute necessity of continuing the treatment at definite periods throughout the life of the syphilitic, whether or not he be an asymptomatic individual with a flirtatious Wassermann reaction.

DR. J. ELLIS JENNINGS: I want to speak of a lecture on this subject that I heard Sir William Gower deliver about twenty years ago. His idea was that syphilis is never cured; that in the blood there is a toxin or poison which is held in abeyance if the patient is treated regularly twice a year as long as he lives. He gave mercury and iodid for a period of six weeks every spring and fall.

ROBERT LEE ROWLEY, Medical Director Phoenix Mutual Life Insurance Company, Hartford, Conn.: With the permission of Dr. Ravold I will venture to refer to the figures put on the blackboard showing the mortality that has been experienced by the life insurance companies on risks that have been accepted with a history of syphilis, and I think perhaps I can make a little clearer just what these figures represent.

In an investigation as to the influence on longevity attributable to different medical histories and different occupations and various other matters that were the subject of statistical investigation by the joint committee representing both the Actuarial Society of America and the Association of Life Insurance Medical Directors of America, it was necessary to fix on some standard from which comparisons could be made. For this purpose the commit-

tee chose the combined mortality of all the contributing companies on risks that were *standard* or free from criticism so far as could be told, risks whose occupations were not known to be hazardous or injurious to health; whose family histories were of the A1 type; and whose medical histories were clear, meaning an absence of all but most trivial illnesses; and risks whose proportion between height and weight placed them in the normal build group.

The mortality experienced on that type of risks—standard so far as could be told—formed the basis for comparison and for convenience this *standard* mortality is expressed numerically as 100 per cent. In the study of some of the classes it was found that the experience was less than 100 per cent. and in others that it was more than 100 per cent. For example, in the class of syphilitics that were accepted as risks between three and five years after infection the mortality was 39 per cent. above 100, as these figures on the blackboard indicate.

The President: Doctor, were those the thoroughly treated cases?

Dr. Rowley: Those were the cases that were thoroughly treated, according to the committee's definition of thorough treatment, which was at least two years of continuous treatment and at least one year's freedom from symptoms thereafter. That was the definition of thorough treatment in this study.

It is interesting to see how the mortality in this group grew very decidedly worse the further away they got from the date of infection.

Dr. Pusey: Up to a certain time. After a certain time, it comes down.

Dr. Rowley: Well, this study included three time periods, between three and five years as the first, the next between five and ten years, and the third more than ten years, and in this group where the date of infection was more than ten years prior to the date of the application, the mortality was 217 per cent. or 117 per cent. greater than average or standard mortality.

Now I have here some figures which show something of interest in connection with this. That was the experience on the cases that were thoroughly treated. We found—and we studied and speculated a good deal as to the cause for that result—this mortality getting so much worse the further away from the date of infection that we got. Now in another class of those not thoroughly treated, where the treatment did not conform to this definition of "thorough," or where there was little or no treatment, we found that in the first time period, between three and five years, or where they were accepted for insurance between three and five years after the disease, the mortality was 284 per cent. And you get just the

opposite condition from what you get here referring to the class of thoroughly treated; you get your greatest mortality in those that were accepted nearest to the time of infection, for some reason or other. We can each one form his own conclusions as to what gave rise to that result. Probably a more careful selection had a good deal to do with it.

I have here some other tables that show the result of looking at the subject in another light. These tables show the mortality based on attained ages; that is, they show the age periods in which deaths occurred regardless of the date of infection. I find here, dividing the group into two classes, those in whom a diagnosis was certain and those in whom the diagnosis was doubtful, that in the first class the greatest mortality occurred in the decade between 40 and 50 years of age. Now I think it is a fair assumption that in this first class, where the diagnosis was certain, the treatment was much more active and much more thorough than it was here where the diagnosis was doubtful. In the latter there were doubtless a great many that had no treatment and a great many that had incomplete or insufficient treatment. If that assumption is justifiable it may be that this means that an active treatment postponed the deaths for a decade. At any rate, we find that here, where the diagnosis was certain and we can assume that they had treatment, the greatest mortality occurred between 40 and 50 years of age; and here, where we can assume that the treatment was less thorough, the greatest mortality occurred between ages 30 and 40.

DR. HENRY JACOBSON: I believe that the next medical-actuary investigation will be somewhat different in result from this, for at the time these figures were taken very little was known about the Wassermann test and certainly less was known about the nervous diseases which we find now are due to syphilis, such as paresis and all nervous manifestations of syphilis. So at the end of the next ten years, when they take up this investigation, these figures will be entirely changed. At the time this was done, a great many of the obscure degeneration of the vessels, viscera and heart were not ascribed to syphilis, as we now know they should be.

DR. E. LEE MYERS: While working in Oskar Beck's clinic in Vienna, I noticed that all cases of syphilis that occurred in Finger's clinic were first sent to the ear clinic for a complete hearing test. They had found that quite a few of the latent syphilitic cases developed an eighth nerve neuritis which resulted in permanent deafness. Beck makes the explanation that a beginning neuritis has involved the cochlear branch in these cases and the use of salvarsan accentuates the condition by setting up an acute vascularization.

Another series of cases of apparently normal hearing persons having a positive Wassermann show an increased bone conduction with a decrease in air conduction; in other words, a shortened positive Rinne. He gives this test as a fairly positive one for syphilis and explains it by an increase of intracranial pressure. These cases frequently have the Herxheimer reaction after salvarsan which results in deafness for a short time, and then totally disappears. I draw the conclusion that in the latent cases of syphilis it is wise to go slowly on the intensive method if there is any suspicion of internal ear lesion.

DR. MARTIN VAN RAALTER: Dr Fry mentioned the word "conscientious" quite considerably. I believe that is a very important thing. As an example, I have seen several cases in which blindness followed the administration of salvarsan; so with that fact in mind, I believe it is much better to have a mild lues for many, than it is to have one person go blind unnecessarily. I believe all cases of syphilis should be treated, but that they should be treated with proper respect for these possible bad results.

DR. HUDSON TALBOTT: I should like to ask that in closing Dr. Engman or Dr. Pusey tell us whether or not it is true that treated cases of syphilis more frequently become tabetic or parietic than nontreated cases. If so, might not that have something to do with the question under discussion tonight?

DR. ENGMAN, closing: I am afraid the discussion has wandered a bit, but I want to say that I have enjoyed it very much. Every one has given his honest opinion and that is what we are here for.

What we mean by the "asymptomatic syphilitic" is the syphilitic which presents a mild Wassermann, or possibly even a four plus in the latent stage of his illness, say from the third to the tenth year, and presents no objective or subjective signs of the disease. Every one encounters numbers of these cases. For instance a patient goes to see his family physician for some slight indisposition, and with the regular, splendid routine adopted in most offices at the present day, the blood of this patient is sent to a serologist for a Wassermann, which is found to be positive, and the patient is either sent to a syphilographer for treatment or is treated by the practitioner himself.

Now the question before us is, "Is it wise to treat these cases intensively by the present methods without further evidence of syphilis?" It is a question whether latent syphilis should be treated as intensively as early syphilis. In the early stage intensive treatment with salvarsan, several doses, followed up with mercury injections, is indicated and has as we all know



proved comparatively very efficient in many cases. Now shall we put the latent syphilitic under this very intensive treatment? He is generally a man approaching middle age and necessarily is less reactive to intensive medication. By intensive treatment I mean the present method used all over the United States and in Europe by which many doses of salvarsan and mercury are introduced intravenously and intramuscularly into the system.

Last week I read in the *British Journal of Dermatology* a discussion that took place on this subject before the Royal Society of Medicine, and it was to me very pertinent with the trend of modern thought showing the conservative views men expressed in relation to the subject, and those discussing the subject were army officers and syphilographers of wide experience. They brought out just the things that have come before us here tonight.

In the latent cases shall we give them intensive treatment, or shall we give them a little mercury or a dose or so of salvarsan? That is the question before us tonight; to obtain the opinion of the neurologists, the internists, and the syphilographers. It is not that I have any dogmatic views on this subject or that Dr. Pusey has, but we believe from our wide experience that it is time to pause a little and look about us. This pause has been caused by encountering patients with badly damaged kidneys and "shot to pieces" we might say. They have been treated most energetically for months and with the consequent damage to the system from such overwhelming, continuous doses of metallic poisons. As pointed out by Hutchinson years and years ago, syphilis after over mercurialization would recrudescence with even greater energy. This, in my experience, is always true in relation to salvarsan, especially the graver forms of syphilis—nerve syphilis and visceral syphilis.

After a certain length of time has elapsed between the initial lesion and positive Wassermann, the Wassermann remains positive. One hopes in the large majority of very early cases to obtain a continuous negative reaction, that is, in those cases that are treated very, very early. The later forms usually remain positive in spite of all the salvarsan and all the mercury that may be given. A negative might occur now and then, but in the usual cases it will not stick. Every syphilographer of wide experience can but confirm this statement. Our opinion is founded on thousands of cases treated at the Skin and Cancer Hospital, at the Washington University, and in private practice, and we are now able after these years to analyze some of the results. Now why go on blindly, butting straight ahead with a routine of vigorous, intensive treatment that is sure to harm

the patient, when such treatment is not absolutely necessary. It is not founded on clinical confirmation. Of course, we must admit that Wassermann positive mothers and possibly Wassermann positive children should be treated actively, and the Wassermann positive husband where he is apt to impregnate his wife. But the ones under discussion for tonight are those who present no active or subjective signs of syphilis, except a positive Wassermann. A syphilitic infant is certainly a symptom of syphilis in the mother.

Here is another point. Why should we become hysterical over a latent syphilitic and condemn him to active poisonous treatment with metals through years, more than we should become hysterical over tuberculous or some other infectious disease. The syphilitic individual may become a carrier, so in other infectious diseases the individuals may become carriers for a number of years. Is it not possible that by treatment of the latent syphilitic in the asymptomatic state we may break up symbiotic foci of the spirocheta as is sometimes done in tuberculosis from too large a dose of tuberculin? We have seen hemiplegia and rapid paresis follow provocative treatment. It is only those who try to analyze their results accrued from a large number of cases and try to profit by this study who can hope to gain headway. As our methods improve we might find that what we call today the asymptomatic syphilitic individual in a few years will be recognized as a symptomatic individual, but from our present knowledge we must only advise that those with the stigmata of the disease should be intensively treated in a routine way though they have a positive Wassermann, but individualized and thoroughly studied and the result of this study thoroughly weighed before salvarsan or active treatment is given. There is no doubt in the minds of many observers that active treatment with salvarsan lowers the natural immunization or resisting processes of the body, especially in the latent stage, therefore its use in such conditions should be thoroughly considered.

Dr. PUSEY, closing: As Dr. Engman says, like all discussions on any phase of treatment of syphilis, the discussion tonight has wandered and has taken up the large subject of the treatment of syphilis in general. I have tried to confine my remarks specifically to Dr. Engman's proposition, what is to be done in the way of treatment in the latent syphilitic, and not to discuss the subject of treatment in general. Dr. Engman and I, of course, treat our syphilitics. We treat them for years, certainly as long as they have any active symptoms. And I go further than Dr. Grindon, who said he would treat his cases as long as there was a positive Wassermann. Fifteen or sixteen years

ago I recorded myself as believing that since we could never be sure that a man was cured of syphilis he should be treated for it with mercury at intervals as long as he lives. If I had syphilis—to use the pleasant assumption that we have all been suggesting for ourselves this evening—I would take mercury twice a year for four to six weeks as long as I lived. Why? Because it would do me no harm, and it might nip in the bud some focus of beginning syphilis. I believe in treating syphilis. Heaven knows there is nothing pleasanter in the experience of the physician than the way he can cure the ugly lesions of syphilis by specific treatment. And I think it is not out of place to recall that we have been curing these for a long time through the good offices of mercury and iodides alone.

I would like to refer to the implication in the remarks of one of the speakers that we have but recently learned about visceral syphilis, and vascular syphilis, and syphilis of the central nervous system. Fournier and Erbe taught us practically all we now know clinically of tabes and paresis. The demonstrative work of the last few years has but confirmed their teachings. And as for visceral syphilis and vascular syphilis, the beginning of our knowledge of it goes back actually to the days of Valsalva. We are not just learning the dangers of syphilis. No man of the present day has emphasized more vividly or more impressively the dangers of syphilis than Fournier did thirty years ago.

Dr. Elder brought up a very important point which, if true, would be a very strong argument for the persistent treatment of latent cases of syphilis. That is the excessive number of cases of syphilis of the testicle that Dr. Warthin finds, and the danger of the transmission of syphilis that lies in these presumably syphilitic testicles. I did not say that I thought syphilis of the testicle was a trivial affection. I did say that syphilis of the testicle in the sense that Dr. Warthin finds it, is, I believe, a trivial affection. The experience of careful syphilographers the world over has shown that these late syphilities do not transmit the disease to their children, and if Dr. Warthin finds that these patients as a rule have a syphilitic lesion of the testicle he has found a lesion which overwhelming clinical experience has shown not to be dangerous to the progeny or to the procreative functions of the patients. As honest and careful a clinician as Jonathan Hutchinson, probably the greatest clinician since Sydenham and one of the syphilographers of largest experience that the world has had, has stated that he never saw a man in the condition that we now call latent syphilis transmit the disease to his children. If a man waits five years without symptoms, he can marry and have healthy children, regardless of Warthin's testicular disease.

## BLASTOMYCOSIS \*

WM. FRICK, M.D.  
KANSAS CITY, MO.

In 1894 Gilchrist reported and demonstrated that a case of skin disease supposed to be tuberculosis verrucosa cutis was really caused by a yeast or mold fungus developing in the skin. In the same year Busse reported a case which proved fatal, involving lungs, lymph nodes, spleen, kidney and bones, due to the same organism. It is from that time our knowledge of this disease has grown. Since then many cases have been reported from many parts of the earth. We have reports of cases scattered all over the United States and from various European countries. According to Castilaine and Chalmers,<sup>1</sup> it is quite common in Ceylon, Southern India, Philippine Islands, Indo-China and probably many other parts of the tropics. More attention has been given the subject in America than in any other country. More cases have been reported from Chicago and vicinity than from any other place. However, as the attention of observers is drawn to the subject in other localities, more cases are discovered. For instance, in the Charity Hospital, New Orleans, no systemic cases had been reported previous to 1914, when within a period of six months' time five cases were observed and necropsy made in full; similar reports will probably be found in other sections. Evidently many cases have been overlooked in the past or diagnosed tuberculosis, cancer or some other disease. No doubt the disease is more prevalent in some sections than in others, and also that it is more prevalent at one time in the same section than at others. A considerable number of cases have been observed in and around Kansas City. Only one of the cases, so far as I know, was systemic or other than a skin infection.

This was a case reported by Dr. Halsey M. Lyle in the *Medical Index Lancet*, October, 1905. The case was that of a colored man aged 52, a miner by occupation. The skin lesions in this case were very numerous and involved a great amount of skin. In addition, the disease had invaded the lungs, peribronchial lymph nodes, mesenteric and various other internal structures.

There have been probably unrecognized cases in this vicinity as well as in other localities. This is not surprising when you consider the difficulty in making a differential diagnosis. Its clinical manifestations resemble tubercu-

\* Read at the meeting of Jackson County Medical Society, January 9, 1917.

1. Manual of Tropical Medicine, 2nd edition, page 1506.



losis and, at times, septicemia caused by the streptococcus or staphylococcus. In this it also resembles tuberculosis but there is this difference between the two: tuberculosis most commonly affects the lungs but the vast majority of lesions in blastomycosis are in the skin. This is fortunate for the patients, since these cases, so long as they are confined to the skin, are usually curable cases but after they become systemic it is an exception for a case to recover entirely. Doctors Wade and Bell<sup>2</sup> have collected and tabulated 47 American cases of the systemic disease, including five of their own. By "systemic" is here meant, when some tissue other than the skin is involved. Many of these cases involve the skin also. Other parts involved in the disease process were the lungs, bones, spleen, kidney, liver, lymph nodes, meninges, plura, prostate, retropharynx, heart, peritoneum, pancreas, adrenals, muscles, larynx, pericardial cavity, intestinal tract, epididymis and testicle, eye, tongue, tonsils, trachea and esophagus and diaphragm. The number of cases in the skin are so many that we have lost count.

The organism causing this infection is a yeast or mold fungus, a very low type of vegetable growth. The first writers spoke of it as a yeast-like fungus but Stober<sup>3</sup> in his very excellent study speaks of it generally as a mold fungus. This particular fungus propagates by budding and is thus to be distinguished from another fungus, which is also pathogenic and multiplies by endosporulation and is known as "coccidial granuloma." Most of the cases of this later have come from California. Hektoen<sup>4</sup> in 1907 reviewed the reports of 17 cases of this disease. The two resemble each other, but coccidial granuloma is always systemic and in nearly all cases proves fatal. The organisms in the tissues in both diseases are spherical and resemble each other, but in coccidial granuloma the organism multiplies by endosporulation while in blastomycosis they multiply by budding. Dr. D. W. Montgomery<sup>5</sup> of San Francisco wrote of the differences between the two, both culturally and clinically. Culturally the principal distinction is that the culture of coccidial granuloma is a circular compact growth with very sharp edges, while that of blastomycosis is circular but fades gradually into the surrounding medium. Clinically coccidial granuloma is more rapid in its course, destroying the life of the patient quicker. Also the skin lesions do not present the miliary abscesses we find in blastomycosis but appears in many cases to be secondary to the internal disease.

Sporotrichosis is another disease which is sometimes thought to resemble blastomycosis and is caused by a somewhat similar fungus. The clinical difference is usually sufficient to distinguish between the two. Sporotrichosis seems rather to primarily involve the lymphatics and secondarily to involve the skin. It produces superficial abscesses along the course of the lymphatic vessels. These abscesses may be several inches apart and may form a chain the entire length of an arm or leg.

Clinically cutaneous blastomycosis has a definite history and appearance. These should serve in most cases to make a differential diagnosis. It begins as an inflammatory papule which becomes a pustule, the contiguous skin is involved and we have a patch of highly inflamed skin with numerous pin-head sized abscesses on the surface. The patch is elevated



Fig. 1.—Dr. Lyle's case.

one-quarter to one-half inch above the surrounding skin and has steeply sloping borders. The small abscesses contain a sticky, opaque substance, generally described as muco-purulent. This material contains the blastomycetes in abundance. They are seen also in sections of the skin involved in the growth. The organism consists of a spherical body, which may be entirely spherical or may be in some stage of budding. This stage may vary from a slight protrusion on the side of the mother cell to a completely formed new cell about as large as the parent cell and ready to be severed from it. We may be able to find the various stages of budding on the same slide. Mycelium is not seen in the tissues but does grow abundantly on culture mediums. After these minute abscesses are emptied, the surface of the involved skin has a rough, uneven appearance which by many is called papillomatous. The

2. Arch. Int. Med., 1916, xviii, 103.

3. Arch. Int. Med., 1914, xiii, 508.

4. Jour. Am. Med. Assn., xlix, 1075.

5. Jour. Cut. Dis., 1904, xxii, 368.

partitions between the abscesses persist for a time, causing this peculiar appearance. After these ulcers have persisted a long time these partitions may break down and then the ulcer will not be so characteristic. When the skin involvement is secondary and the abscesses located deeper in the skin or subcutaneously, we have not the characteristic miliary abscesses.



Fig. 2.—Case No. 1. Side view.

The clinical appearance of the lesions should lead us to suspect this disease and when this suspicion is followed by a microscopical examination the diagnosis should be made certain. When other anatomical structures are invaded by these organisms diagnosis may become more difficult. In 96 per cent. of the cases tabulated by D. Wade and Bell the lungs were involved. In 89 per cent. the skin was involved.

In a large per cent. of the systemic cases the port of entry is the respiratory tract. In the cutaneous cases the history generally begins with an injury of the skin; it may be only a slight cut or abrasion. When the skin has been the only seat of the disease for a long time, perhaps for several years, some of the blastomycetes may enter the lymphatics or blood stream and may be carried to other parts or be quite generally distributed in the tissues. The lymph nodes become inflamed and form abscesses. The lungs are inflamed causing cough accompanied by expectoration of blood-streaked mucus. Fever and night sweats also

belong to the history of the disease. It runs a more acute course than tuberculosis of the lungs but it is commonly diagnosed as such. The only conclusive way to recognize that it is not is by microscopical findings. Reports have been made of both diseases co-existing in the same patient.

When the bones and joints are affected it is difficult to differentiate between this and some other infection. Unless there is some other manifestation of the disease, a positive diagnosis can hardly be made without finding the organism in the discharge or the broken down tissue. If we know that we are liable to see such cases we will be more apt to make the necessary examination in obscure cases.

Recently three cases of blastomycosis have come under my observation.

CASE 1.—Male, 59 years old, barber by trade, large man and in every other way quite healthy. Family history of no importance in the case. Man of good habits and good personal history. Referred to me by Dr. J. W. McKee. The point of infection in this case was evidently the entrance to the nostril just in



Fig. 3.—Case No. 1. Front view.

the beginning of the mucous membrane. From this location it extended to the skin of the upper lip and the entire nose, even extending slightly to the cheeks adjacent; the upper lip, anterior nares and the entire nose were greatly swollen when he came under our observation for the first time. The characteristic miliary abscesses were present over the nose, cheeks and upper lip. They were yet unbroken and gave us an opportunity to observe the characteristics of the



abscesses and the sticky discharge from them contained the usual spherical organisms. From the floor of the nostril there was abundance of the tenacious discharge and inspection revealed numerous emptied abscesses. The swelling in this location was enough almost to close the nostrils. The contents of one of these unbroken abscesses was subjected to microscopical examination and the blastomycetes were found in abundance. Some were budding.

Treatment consisting of potassium iodid internally, a local antiseptic and the Roentgen ray. Improvement was prompt and continuous until well. Considering the location of this infection, just within the outer nares, the wonder is that the lungs were not involved.

CASE 2 was a man about 35 years of age, seen with Dr. Marsh at the Swope Settlement Dispensary. The left forearm and forehead were involved. The forearm was covered with the characteristic ulcers and scar tissue in between. On his forehead between the eyes was a patch  $1\frac{1}{2}$  inches in diameter. Some one had made a diagnosis of rose cancer, whatever that may be. We made a clinical diagnosis of blastomycosis and used the microscope to corroborate.



Fig. 4.—Case No. 3.

The blastomycetes were present in scrapings from the surface of the ulcers. We never saw this case afterwards.

CASE 3, seen with Dr. D. P. Dyer of Sedalia, Mo., male, aged 67, and in poor health before this disease was contracted. The lower lip was greatly swollen with several ulcers on the surface. The entire thickness of the lip seemed to be involved and there was a discharge from the open ulcers of a seropurulent material. It bled on the slightest manipulation. Microscopical examination of broken-down tissues from the surface of the ulcers revealed the presence of blastomycetes. In the neck beneath the chin were two tender palpable glands. This examination was made six weeks after the beginning of the trouble. A week later the doctor wrote me that the patient had rigors and was having a run of temperature. He was in doubt whether this was due to a case of lagrippe or from this blastomycetes infection. Later he reported the lip had healed but the patient had broken out with ulcers all over his body. Still later he reported the ulcers had healed and the patient had apparently recovered from this malady, but he thought that there were some indications of locomotor ataxia.

Rialto Building.

## MEDICAL EDUCATION IN MISSOURI AN IDEAL \*

FRANK G. NIFONG, M.D.  
COLUMBIA, Mo.

So self-evident was the necessity for general education of the people, if they were to be self-governing, that the founders of our Republic began early to provide for popular education and by their wisdom made it a part of the state's functioning.

Among the wiser idealists was one, Thomas Jefferson, who realized that not only elementary and mediocre learning was necessary, but that the greatest benefit to humanity and the state would come from the lesser number who might receive higher and technical learning. He realized that professional and special learning was quite as essential to the general welfare and believed it should be the business of the government to provide that education for its people. This was the great ideal of Jefferson, realized in the founding of Virginia University. This educational policy has demonstrated the wisdom of the founders, for it is unquestionably the most valuable asset of the Republic.

Long since has the public school system and university education become the established policy of each state. No longer is there any question as to the justice or wisdom of the state educating her scientific and professional men, for these individuals are the most valuable asset of the state. True it is that the main idea in popular education was to insure stability of government, but higher technical and professional education also contributes to governmental stability and proves to be a valuable economic policy. Leaving out the higher and more spiritual contributions of higher education to general welfare and happiness and counting only the materialistic and it is still worth while and contributes many times more than it costs. Higher education, it is true, cannot go to all even if free to all but its beneficence comes from above and filters down through the masses, benefiting even the lowliest.

This professional education has proven its economic worth to the state and should be fostered more and more. No policy of the founders has proven of more wisdom and contributed more to the state's people and humanity in general.

I say our state universities should educate our lawyers. Our lawyers are of inestimable value to the state and contribute much to stability of government and justice and equity. Surely they are worth what they cost and much more from an economic point of view. Let us educate them free, as we do at our State University.

\* Address at the meeting of the St. Louis Medical Society, Oct. 2, 1915.

Our engineers may be even of more value to the state, from an economic point of view, constructing as they do, our bridges and highways, our electrical plants and all the various industries that contribute so much to the general welfare and material happiness of all the people. Yes, we educate them in Missouri University and properly.

Our teachers we educate in the science of pedagogy and thus we repay ourselves many times over for the expense incurred. We educate our teachers in Missouri University and in our normal schools.

Agriculture we foster and we are beginning to be quite generous with agriculture. Scientific agriculture is well worth while and can contribute much to material wealth and general prosperity, so we believe in higher education for agriculturists. It is given free at our State University and has proved to be of great economic value.

It is thus by our higher educational system we invest in manhood and learning and get manifold returns.

Do we educate our doctors of medicine with our doctors of law, of philosophy and of science? We do not.

Now, why do we not? May it not be partly because you and I have been lacking in our ideals and too busy trying to keep pace with medical science in these latter days of rapid progress?

Why are we complacent when our state barely begins to provide us medical education? We should demand medical education from the State of Missouri—as free to her sons and daughters as is education in law, in agriculture or engineering. From an economic point of view medical science gives more than all others and receives less.

You, to whom I speak, you who know, to you it is needless to try to estimate the value, the economic value, of one great medical discovery after another.

Has any other science produced a life equal to Pasteur, the father of modern, truly scientific medicine? How dramatic and wonderful was his work when discovering one great scientific truth after another and applying that science to the saving of millions to France in her industries, but saving in life and material value an incomprehensible infinite to posterity. It was not alone the wine, the beer, the silk saved, but it was the discovery of the cause of fermentation—the very foundation of modern scientific medicine. It was cholera, anthrax, septicemia, rabies. His discoveries were the foundation of all and his genius and inspiration was that which led his disciples from one great discovery to another and has made in a few short years, modern scientific medicine the wonder of the world. The inspiration of Roux, Yersin,

Calmette, Metchnikoff and of Koch, Klebs, Loeffler, Eberth and the great German school.

Yes, inoculation of sheep and cattle for splenic fever has saved millions in value, but it laid the foundation for the discovery of the causes of infectious diseases and their preventions and saves thereby more than you and I can comprehend. The black plague, the white plague, smallpox, yellow fever, malarial fever, typhus and typhoid, and so on, to the end of the list and almost all are in subjection.

Have we no claim on our state and its people when our science prevents bubonic plague from ravaging the country? I wish the world might better know its terrible history. Have we no just claims to recognition? Our economic value alone in the prevention of any of the great plagues is incalculable and should prompt a generous state to grant any reasonable request from a science able to do so much. It is a fact, however, that our state is ungenerous to us and we are at fault in not demanding our rights more insistently.

The world should know more of our scientists and the great services that have been done for all. They should know of Reed and Carrol and Finlay and the history of yellow fever. Let the people know of our great executive scientist, Major (now General) Gorgas, and understand that although the greatest engineers of the world should try they may not build a Panama Canal without medical science. Also, let them know that the discovery of the causes of malarial and of yellow fever and scientific sanitation has made Panama as habitable as St. Louis and, furthermore, that through this science a new empire is opened to the white man and his energy, a country of wealth beyond the dreams of avarice—the tropics and our own Southland which is destined to become the richest in the world. Let the people know such truth and then we soon would be appreciated. Then, no doubt, we would receive ample scientific medical education from our state and as freely as do other professions.

Examples may be multiplied to show the claims of medical science on the State of Missouri. That is not necessary to this audience. I feel that it is a fact that does not even admit of argument.

What the State of Missouri is doing you may know is only preparatory. Our abortive medical department of the University of Missouri does very well, so far as it goes, teaching two years. Yes, it is in class A. But to our shame as a profession and the shame of the great State of Missouri, we send our embryo medical men to our neighbors for development.

We people, nearly three and one-half millions of us, who are assessed at nearly two thousand million dollars, which represents only a fraction of our wealth, we who live in the greatest state



of the Union, whose varied resources and great wealth has not even begun to be developed, we publish to the world our dependence, our lack of energy, our lack of ideals. But is this the fault of the people in general, or is it our fault as a profession? The indictment is for us alone. The fountain will not rise above its source. It is we ourselves who must awaken to our opportunities and to our duties. It is ourselves, who are lethargic or quite asleep. We must realize the great demands of medicine since becoming a true science and be equal to those demands. We have become somewhat confused in this evolutionary and almost revolutionary period in development in medical science and teaching. The rapid changes from commercial education to the very much higher plane, now prevalent, of endowed sectarian schools and state universities. Yes, it is incalculably improved because the number of graduates have been reduced one-half in fifteen years and colleges from 159 to 95. We have been letting what appeared to be well enough alone. We have not caught the vision.

What, then, would be ideal for Missouri?

1. Let us have complete and thorough medical under-graduate education; a medical department of the State University second to none and capable of giving us medical men thoroughly equipped and equal to the demands of modern scientific medicine.

2. Let us have a post-graduate school where our doctors may be frequently reeducated in our rapidly growing science and art. Let eminent teachers be brought to us from all the world to teach us, and our guests from other states, the newest developments of our science. This school also should be a part of our great University.

3. Let us have research laboratories in connection with these schools intimately in touch with the whole profession of the state that new truths of incalculable value may be discovered. Let this laboratory pay well the men who have a passion for the work.

4. And by no means the least important, let us have a school and department of preventive medicine—a department of the university where we may train sanitarians and health boards—a department for service in the popular education of the people, by sending teachers to high schools, by popular lectures in communities and by demonstrations and bulletins in all the accredited ways of so-called university extension work. In no other way than by such general education may the true worth of medical science and her devotees become known.

Popular and general education would be the death knell to falsehood and all quackery. We would have no need for legislation to protect

the innocent and we would be appreciated for our true worth.

It is not my purpose to disparage in any way the splendid foundations established for medical teaching by private endowment of sectarian universities. All honor to them, and God-speed them in their splendid endeavors; even more honored should they be when they are doing that which the state should do.

But I speak for an ideal, the State of Missouri is able and should educate her own physicians. She is able and should foster every branch of scientific medicine and research. She is able and it is her obligation, her sacred duty, to educate us as she does her lawyers, her farmers and engineers. Not her duty to us alone as a profession, but a duty to all the people. Able! Yes, amply able, and what we build for all, we build on the broadest foundation and for permanency. Yes, "men may come and men may go," schools may prosper and decay, endowments may come and melt away, the best securities may ultimately disintegrate, but the resources of the great State of Missouri will ever increase. Private endowments must be supplemented by other private endowments to meet increased demands and compensate for decline in values. Five million dollars at 4 per cent. may yield two hundred thousand dollars, but two thousand million dollars at 1 mill will yield two thousand thousand dollars or two million dollars. How much more secure would be the rich man's tablet in the hall of fame if he willed his money to the state with such resources to maintain it.

Such is the secure foundation on which we would establish medical education and medical research in Missouri. Such is the plan which conforms with the ideals of our government. It would be our medical school, our pride and ours for service to all mankind. It would be ours for the free education of our medical students and medical practitioners and ours for the general education of all the people in preventive medicine and sanitation. It would be ours to ever increase in work and worth, as our state increases in wealth and population. Ours, all permeated with democratic spirit, the spirit of truth for the greatest service to the greatest number. Yes, ours to give our poor boys who have the industry and native ability to take advantage of the gift. Free, though it may cost according to the estimate of the Council on Medical Education of the American Medical Association, \$1,528 to produce a doctor; we will give it to them and get returns a thousand fold. Now this is merely the suggestion of our view, a glimpse of our ideal for medical education. To this conclusion we must come, that it is the business and duty of our state to give us the best and most complete scientific medical education possible, to foster medical research and educate sanitarians, to still further educate

us who are in the service now, for in no other way could she contribute more to the welfare of the people, which should be her first concern.

It matters not where it may be given, only let it be given where it can be given best. Give it to us freely and without cost, for that is only justice. We will give back in wealth, in comfort and general happiness a thousand fold.

### TONSILS AND ADENOIDS\*

J. P. McCANN, M.D.  
WARRENSBURG, MO.

In writing a paper on tonsils and adenoids I have endeavored to present to this society some practical thoughts concerning diseased tonsils and adenoids and have given no space to anatomy, as such can be read in any textbook.

As to the physiology or function of the tonsils and adenoids I shall be brief, but wish to present a few points bearing on that line.

The function of a normal tonsil has been and is yet a question for discussion. Many theories have been advanced but none of them can be proven or has been generally adopted, as it seems there is no perceptible difference in any way with a child with a perfectly healthy pair of tonsils and one who has had his tonsils removed. However, I shall present for your discussion a few of the theories that have been advanced as to their function.

By some it has been contended that the function of tonsils and adenoid tissue is to afford a protection to the general system by being placed as guardians at the entrance of the respiratory tract. Some contend that they perform this function by acting as absorbents or filters, while others think they secrete something that acts as a preventive to the entrance into the general system of diseased germs. Based on this theory, some have contended that children who had their tonsils removed were more apt to contract tuberculosis. This has been in former years perhaps the most popular theory but it lacks proof and has few adherents among the more advanced men. Children who have only slightly diseased tonsils develop more rapidly and improve in general health after the tonsils have been removed. Statistics show that children who have had tonsils removed are no more subject to infections than those with normal tonsils and that they are not nearly so subject to infection as children with diseased tonsils. Other theories advanced as to the function of the tonsils are that they aid in articulation and deglutition, that they have

something to do with the voice, and that they have in some unknown way something to do with the reproductive system. None of these theories has been substantiated by any conclusive proof. After removal of diseased tonsils and adenoids, children articulate and perform the functions of deglutition much better than before removal and equally as well as those with normal tonsils. After the removal of tonsils that are even slightly diseased the voice of singers will show an improvement if the one precaution is taken to thoroughly enucleate the tonsils and not injure the pillars.

The theory that tonsils have some unknown relation to the reproductive organs probably was advanced from the fact that many men have observed that newly married people are very prone to acute tonsillitis. This fact can be explained when we remember that both tonsils and ovaries or tonsils and testicles are glandular tissues and that excessive excitation of one might cause some excitation and irritation of the other, just as we are liable to have complications with testicles or ovaries during an attack of mumps. Aside from this we have no evidence of any connection between the two.

The only true answer we are able to give when asked "What is the function of tonsil and adenoid tissue?" is, "We do not know."

The real issue, however, that confronts the physician regarding diseased tonsils and adenoids is, "What are their effects on the child and what is the remedy?" I would divide the effects of diseased tonsils and adenoids into two general divisions: First, immediate conditions observed as sore throat, fever, tonsillar and peritonsillar abscesses, retropharyngeal abscess and mechanical obstruction of respiration preventing a normal amount of oxygen from entering the lungs. The mechanical obstruction may be continuous or only recurring at intervals. The other conditions named may occur at either long or short intervals. The second, and by far the more important part of this division, is the complications which may arise from diseased tonsils and adenoids. The complications accompanying or following diseased tonsils and adenoids are numerous and I shall speak of only a part of the more frequent and more important ones.

A very frequent and I believe the most serious complication is infection into the middle ear. The infection travels up the eustachian tube, the tube becomes swollen and closed, the out-pour of exudate gradually fills the tympanum and the drum head becomes tense, red, and bulging. Later if not relieved by a paracentesis rupture of the drum may take place and somewhat relieve the situation. But before this takes place the exudate may reach the upper chamber of the tympanic cavity and following the line of least resistance the auditis

\* Read before the Meeting of the Johnson County Medical Society, Oct. 10, 1916.



becomes infected and the exudate flows into the mastoid antrum. In this way we may have developed a mastoid abscess with all the possible complications, such as brain abscess, involvement of the labyrinth, infection of the jugular vein and lateral sinus and meningitis. Any of these complications as we know have a high mortality rate and an infected middle ear is hard to cure even if no other complications arise. As this is not a paper on mastoid and ear effects, but one on tonsils and adenoids. I will not discuss the treatment of this condition except to say that it is much easier to prevent than to cure mastoid and middle ear diseases by paying more attention to the conditions that produce them, and that a child with earache or a running ear should be given much more serious attention than he usually receives. At the proper time he should have a thorough examination of his nose and throat and an effort made to prevent another attack.

A less serious ear complication is where we have a catarrhal condition of the pharyngeal end of the eustachian tube, the lumen is closed but no bacterial infection passes into the tympanic cavity. The air in the tympanic cavity is soon absorbed producing a vacuum with a retracted drum. The vacuum soon causes a transudate of lymph to fill or partially fill the cavity and thus relieve the vacuum. This may or may not become infected with bacteria. If it does a condition as described under mastoid abscess supervenes. If no bacterial infection takes place, the swelling subsides in the tube and it becomes patulous, the lymph is absorbed and recovery is the ultimate end. Loss of hearing may be expected where we have any involvement of the ear for any great length of time, also we many times have loss of hearing where adenoid tissue covers over the end of the eustachian tube and thus obstructs the free passage of air through it.

Other complications which I shall name are rhinitis, enlarged turbinates, catarrhal disease of nose and throat, suppuration of lacrimal sack, conjunctivitis and occasionally infections of deeper structures of eye, such as retinitis and loss of vision, affections of the sinuses—frontal, maxillary, ethmoid and sphenoid—retarded development and narrowing of the maxillary arch producing crowded and irregular teeth, poorly developed chest, general toxic conditions, rheumatism, anemia, frequent colds, irritable nervous system, restless nights and enuresis. In recent years it has been recognized that a very large per cent. of rheumatism is caused by tonsils, adenoids or teeth.

The last question that I shall discuss is, "What is the remedy?"

First, I would say *prevention*. A campaign of education along these lines would certainly be a great boon to childhood and to the future

generation. Cleanliness, more outdoor life both day and night, strict attention to all acute nose and throat affections, uniformity of throat dress, cold bathing to develop resistance, and better food and clothing. Children who are cleanly are not so subject to nose and throat troubles as are those who are not, other things being equal.

I do not wish to be understood as advocating that children should not be allowed to play and get dirty. No child can play as a child should and keep dolled up. I believe that children should play and have a certain amount of rough and tumble (more than most children get), but I do not believe it necessary for them to be filthy. They should be taught proper bathing, to cleanse their teeth and to avoid dust as much as possible or anything else that might irritate the air passages, and to take proper care of nasal secretions when affected with acute colds. They should also be taught to avoid public drinking cups, towels, borrowed handkerchiefs, etc.

Children who spend much time out of doors in the sunshine and have plenty of air in their rooms at night are less prone to these affections.

In regard to the throat dress, I believe the habit of wrapping up the throat too much is responsible for much trouble. By doing so the throat becomes tender and the resistance low. Then when in an unguarded moment the child is exposed to cold he suffers a circulatory change which invites a bacterial infection. Cold bathing of throat and chest has been a great aid to many people who were subject to throat affections.

The question of better food and clothing applies not so much to children in the country and smaller cities, but is quite a factor in the larger cities.

As to medical and surgical treatment, I shall be brief as almost every physician has his own line of treatment. In tonsils which are not badly enough diseased to demand removal or for any reason are not removed, perhaps there is no better treatment than cleaning out the crypts and painting with Mandell's solution. Constitutional treatment should be given if indicated. If the process has gone to suppuration the pus must be evacuated. In peritonsillar abscess this can be done much easier and better if you will separate the pillars from the tonsil with a Leeland knife than if you cut into the tonsil or pillar.

To the question, "What tonsils should be removed and what ones should not?" I would say, healthy tonsils should never be removed. Slightly diseased tonsils that threaten no immediate complications should not be removed but should be treated and if in a reasonable time they do not become healthy, then removal should be decided on. Tonsils that are very

much diseased or if only slightly diseased and have shown a tendency to be accompanied by complications should be removed as soon as possible. Some people and even some physicians will oppose the removal of tonsils but can give no reason for such opposition only that they believe they were put there for a purpose. I believe they were put there for some purpose even though we do not know just what it is, but I also believe that when they become diseased they are unable to perform any function they may have and then they become a menace to the health and well being of the child. The same parties who are opposed to the removal of diseased tonsils would not advise you not to remove a diseased or rotten tooth that could not be cured by filling or treating. A diseased tonsil, owing to the nature of the tissue, is a far better breeding ground for disease germs than a diseased tooth and the tooth certainly has a more important function than the tonsil.

Many different methods have been adopted for the removal and partial removal of tonsils. In former years many men have used the tonsillitome and cut off the exposed part of the tonsil, but this method has become almost obsolete, as in a very large per cent. of cases it does no good and even if temporary relief is afforded, in a year or less time the tonsil is as large and badly diseased as ever.

To enucleate the tonsil completely there are two methods in general use, the snare and the Sluder instrument. I much prefer the Sluder for the following reasons: First, it is much safer in regard to hemorrhage as no preliminary dissection is required; second, the throat heals in a very much shorter time as it causes less traumatism; third, it is quicker done, thereby requiring a shorter anesthetic; fourth, the tonsil is removed in its capsule much smoother than when snared; fifth, there is much less danger to the pillars than when the snare is used. The throat is well in a much shorter time when the tonsils are enucleated either with the snare or Sluder than when the base of the tonsil is left, for the reason that if it is enucleated the tissue to heal is healthy while if a part is left it is apt to be diseased and devitalized tissue.

For the removal of adenoids I prefer the La Force adenotome and the Gottstine curets. After using these instruments I wipe out the postnasal space with a piece of gauze wrapped on my index finger and am careful in this way to clean out the fossa of Rosenmüller.

A general anesthetic is always advised for children and usually for adults. The shock to a child that is held while tonsils and adenoids are removed is far more dangerous than an anesthetic properly administered, and if any hemorrhage is encountered you are at a great advantage if the patient is under an anesthetic.

Waggett of London cites a case where a child fell dead when confronted by the surgeon a few days after he had removed tonsils and adenoids without a general anesthetic. I have seen several cases in which severe mental and nervous shock followed removal under local anesthesia. I have personal knowledge of two cases in which the results were very serious, one of which died from nervous complications a few weeks after having her tonsils and adenoids removed without an anesthetic.

---

#### THE RELATION OF NASAL AND ORAL SEPSIS TO SYSTEMIC DISEASE\*

T. A. BLACKMORE, M.D.  
WINDSOR, MO.

The danger of systemic infection from nasal and oral sepsis is becoming more and more apparent from year to year, and I feel that I do not mistake the occasion in presenting for your consideration a few thoughts on this important subject.

That a very close causal relationship exists between septic foci of the nose and mouth and varied and numerous general diseases and obscure manifestations has been well established by Hunter, Fletcher, Osler, Billings, Rosenow, Mayo and many other observers.

It might be well to say at the outset, that by focal infection we mean that before a person can become a victim of a generalized infection, the infective organism must first have gained admission to his general system through some primary focus or port of entry.

When inspection of the nose or mouth reveals the presence of infected foci associated with general disease, the coincidence of the former to the systemic disturbance will be found more often causal than casual.

In the last decade, particularly, has mouth hygiene been brought prominently before both the physician and the dentist, yet I realize that the great majority of both professions are far from recognizing its importance. Surely there is a vast unexplored territory now opening before us, which presents great opportunities for scientific investigation and practical endeavor.

A few years ago Dr. C. H. Mayo read a paper in Chicago in which he said: "It is evident that the next great step in medical progress, in the line of preventive medicine, should be made by the dentists."

That our oral specialists are rapidly awakening to a full measure of their opportunity and responsibility, is borne out by their many valuable contributions in recent years along the

---

\* Read before the Henry County Medical Society, Oct. 11, 1916.



line of health conservation through dental prophylaxis.

Further evidence that there is reason for much substantial hope in this special field of endeavor is shown in another statement from Dr. Mayo in his address at the dedication of the Research Institute of the National Dental Association, in which he spoke as follows: "As we see things today, it means there will be far less surgery and less sickness when the full benefits of the knowledge of modern dentistry and the cause of many diseases becomes known throughout the world."

The nose and mouth are constantly exposed to infectious bacteria, especially in individuals who live in densely populated centers, with unsanitary environment; and both clinical observation and coincident bacterial experimentation bring unmistakable evidence to show that the mouth, nose and the accessory sinuses are fruitful sources of systemic infection.

Skilern in his work on the accessory sinuses of the nose has brought much proof to show that these cavities are very commonly the focal source of sundry systemic diseases. Thus Gradenigo found at autopsy, sinus suppuration in forty-five out of 203 cases examined, or 22 per cent.; Wertheim ninety-five out of 360, or 26 per cent.; Minder fourteen out of fifty, or 28 per cent.

Thorne has pointed out that the loss of ciliary motion which precedes death would predispose to the accumulation of septic material within these cavities; and while the frequency of infection as shown at autopsy is evidently too high, the refined clinical technic of the present day reveals a much higher percentage of sinus disease than was formerly supposed. It must be borne in mind that all malformations and hypertrophies of the nasal cavities which interfere with normal drainage, whether congenital or acquired, predispose to infection.

Certain situations and size of the sinus openings, enlarged ethmoidal bulla, deviations of the septum, the presence of adenoids and the close approximation of the middle turbinate to the lateral nasal wall, all invite microbic invasion. While it is true that diseases of the nose and mouth cause but a very small proportion of deaths directly, they do cause a much larger proportion indirectly, and they are responsible for a very large part of the disability from sickness.

Suppuration in either the nasal or oral cavities is the direct result of bacterial invasion. In the normal state the sinuses are protected against microbic infection in two ways: (1) By the action of the cilia of the lining mucosa, which continually wave toward the sinus ostium. (2) By the secretion of the glands situated in the mucosa, which possess decided inhibitory

power to the further growth of the invading germs.

I believe the influenza bacillus is placed first by the consensus of opinion in the causation of sinusitis; but the pneumococcus, streptococcus and staphylococcus are very frequently the offending agents.

In the oral cavity it is somewhat difficult to say definitely just what particular tissue or portion of the mouth is most frequently infected. The dentist would doubtless contend that the teeth are most often involved, while the physician would consider the tonsils and other lymphoid tissue the chief avenue of invasion.

It appears, however, that the oral tonsil was the organ against which the first crusade was inaugurated, but it was found ere long that the tonsil did not tell the whole story and other foci of infection were sought.

It must be admitted that acute inflammation of the tonsils is a somewhat serious though fleeting affection, and while from it large quantities of toxins, but few bacteria are absorbed. It is more commonly from the obstructed crypts of the tonsils, due to chronic inflammation or the sealing scars of tonsillotomy that the most frequent focal sources of systemic disease are found.

Billings reminds us that the infection may pass from the throat and sinuses along other mucous tracts and invade the eye and also the middle ear and mastoid cells, or it may pass through the lymphatics to the meninges or the lymph glands of the neck.

The relation of suspected foci to systemic disease seems to be proved in many instances by several factors. When the infected focus is removed by surgery or other means, it is often followed by rapid recovery from the systemic disease. Many of you have doubtless noticed the great improvement in the general health by tonsillectomy, removal of postnasal adenoids, extraction of carious teeth and the cure of alveolar dental infections. Only this morning I inspected a little lad from whom I had removed a mass of adenoids some four months ago. His father told me he had been a different child, physically and mentally, from the time of operation.

One must recognize the improvement in the ability to breathe when obstruction to the air passages is relieved by tonsillectomy, adenectomy or excision of hypertrophied turbinates; a better digestive power and consequent improved nutrition by correction of dental faults; but admitting this, it seems obvious that relief from continued systemic infection is the chief reason for the general improvement.

Dr. T. W. Brophy of Chicago reports the following case: "I had a patient come to me with a bad arthritis deformans. He was barely able to walk for two years, and was practically unable to dress himself. The patient was a man of means and he was able to

consult many prominent physicians. He had visited sanatoriums, hot springs, mud baths, etc.; in fact, he tried every thing to eliminate the uric acid condition. He came to Chicago, saw the most noted physicians of the city, and they were unable to find a focal infection; finally he came to see me and I examined him thoroughly. I found nothing; however, I started treating him and looked again and again. I was rewarded by finding an infected pocket back of the third molar. An autogenous vaccine was made from this pocket and after a few injections his hands cleared up. A pustule appeared on his knee, and a specimen of pus was taken from this and compared with the pus taken from the tooth pocket. They were of the same type."

While many different cocci and bacilli may be disseminated from various foci of infection, the streptococcus is responsible for the greatest tissue destruction and plays by far the most deadly rôle. Its chief varieties so far recognized, producing pronounced tissue changes, are said to be the *S. pyogenes*, *S. hemolyticus*, *S. viridans* and the pneumococcus. That certain varieties of the streptococcus possess pronounced affinity or selectivity for given tissues has been plainly demonstrated.

Starting with a certain strain of streptococci Rosenow was able, by varying the cultural conditions under which he grew these organisms, to transform the original type into other types of streptococci, which we have been accustomed to look on as distinctly different from one another in their biological and chemical characteristics. Not only was he able to produce different forms of streptococci, but he further changed streptococci into the diplococci of pneumonia and vice versa. The essential cultural factor which he employed in bringing about these changes was a variation in the degree of oxygen tension.

Billings tells us that a focus of systemic infection may apparently give rise in one individual to an acute process, and in another to a chronic disease. This is said to be especially true of the acute and chronic forms of arthritis, myositis and endocarditis, and appears to be due to the modification which the streptococci may undergo in known mutation of cultural characteristics and pathogenicity in varying culture media and serial animal inoculations.

From experiments and animal inoculations it seems reasonable to conclude that mutation of specific pathogenicity takes place in the streptococcus group in the focus of infection, these organisms in the latent focus having changed in pathogenic character because of the variation in the oxygen supply or some biochemical qualities of the tissues in which they lie.

With the defenses of the body diminished by overwork, dissipation, exposure to cold, insufficient or improper food, by unhygienic surroundings, by injuries from previous disease or trauma, the individual may suffer from acute or chronic arthritis, myositis or malig-

nant or simple endocarditis or pneumonia dependent on the phase of mutation in the selective qualities of the specific strain of the organism in the focus of infection. Rosenow has even isolated a streptococcus from gastric ulcer, excised at operation, and guinea pigs inoculated with these germs developed typical gastric ulcer.

Bacteria find conditions of life very satisfactory in the dirty mouth. Here neither warmth, food nor drink is lacking, and they thrive luxuriantly.

As long as the tissues of the mouth are vigorous or the accumulation of bacteria is not so great as to overcome their resisting power, the resident microbes are afforded no opportunity of gaining a foothold. But if the tissue vitality is reduced at some point or rupture in continuity occurs, this *locus minoris resistentiae* affords a favorable opportunity for focal infection. Once a port of entry has been found and focal infection of the mouth, nose or throat has occurred, the germs may reach the system through the blood, lymph or through the gastrointestinal tract by being swallowed. That an enormous amount of pus is swallowed in a well marked case of pyorrhea is very evident. Dentists tell us that it takes from twenty to forty years to destroy a good set of teeth. Bass computes that during that time a patient swallows about two gallons of pus. It is doubtless true, as Rhein holds, that most of the swallowed bacteria are destroyed by the digestive secretions of the stomach and intestines and by competition with the normal bacterial flora, but if these fortresses of the body are passed such pus germs are easily absorbed into the circulation and pass into the lymph-spaces. Brophy contends that filthy mouths account for many cases of pneumonia with death following operation.

The germ laden secretions pass into and infect the lungs during anesthesia. The bacteria from a focus of infection may pass through the blood stream as claimed by Billings and lodge in the arterioles and capillaries of the organ or tissue as embolic masses. As a result of these emboli, small hemorrhages usually occur with subsequent infection and often suppuration in the various organs and tissues in which they lie.

Martin Fisher adds to the list arteriosclerosis, which is to be looked on as an embolic process in the minute blood vessels which supply the coats of the arteries.

W. T. Woodyatt has called attention to the frequency with which exophthalmic goiter is associated with infected mouths; and Rosenow has, in a number of such cases, isolated a streptococcus from the thyroid gland, which, when injected into animals, caused a hyperthyroidism to develop.



A number of cases of glycosuria has been collected in which focal infections were present, and the glycosuria disappeared after the infected teeth and tonsils were removed. From septic foci in the nose and mouth we have the absorption of toxins as well as bacteria. These also exercise a selective action on certain organs; for example, the kidneys, producing nephritis; sometimes on the skin, producing erythematous rashes, urticaria, etc., and not infrequently on the nervous system, producing severe mental and degenerative effects. There is little doubt that many cases of chronic interstitial nephritis result from long continued absorption of toxins from the nose and mouth.

These toxic symptoms are often manifested by slight fever and occasionally light chills; there is a feeling of fatigue, malaise, headache, fleeting joint pains and nervous symptoms, often vaguely classified as autointoxication. How often we find patients who are complaining of rheumatism, influenza and vague symptoms of discomfort, and on investigation we locate the causal factor in a focal infection of the throat or mouth.

In oral sepsis no evident lesion may show, no discomfort be felt and the cumulative effects appear only when the sepsis extends over a long period of years.

In four schools of London 43.6 per cent. of the cases of rheumatism showed abnormality of the tonsils or pharyngeal mucosa or both. Eighty-eight per cent. of the cases of heart disease in a children's hospital in London showed enlarged tonsils or tonsillar lymph glands, or exhibited excoriations of the nostrils or pus in the nasal cavities.

Lindsay reports 172 cases of rheumatoid arthritis in which particular inquiry was made for infective foci. In 88 cases the infective foci were found, twenty of which were due to pyorrhea alveolaris, and in the majority of the 172 cases some inflammation of the mouth existed.

From Wirgman and Turner we learn of forty-two cases of gout, acute rheumatism, rheumatoid arthritis and rheumatic conditions in which thirty-six had marked pyorrhea alveolaris and six had septic tonsils.

Blair has observed two cases of torticollis with early scoliosis that were relieved by opening an alveolar abscess in each case.

Holmes cites the case of a boy who became morally delinquent; it was found that some of his first teeth were unerupted and others not yet shed. Treatment of his teeth produced marked improvement in his moral condition.

A statement has recently come from the Mayos that 80 to 90 per cent. of the cases operated at their clinic for appendicitis are the indirect result of mouth sepsis.

Moynahan of England confesses that after reading the papers of Hunter, of Charing Cross

Hospital; Jessen of Strassburg, and Osler of King's College on oral hygiene, he reduced his fatalities from operations on the digestive tract 7 per cent. by placing them, preparatory to operation, in the dentist's care.

These reports can leave no doubt as to the culpability of the teeth, tonsils and sinuses in the production of such systemic diseases as articular and muscular rheumatism, endocarditis, cholangitis and streptococcemia with all its train of evils. Similar reports to the above might be continued at great length, but enough have been cited to show the striking relation between focal infection and systemic disease.

That other foci of infection in other parts of the body bear a like relation to systemic disease as those of the nose and mouth, I am free to admit, but of these I shall not deal on this occasion.

*The diagnosis* of focal infection is often not a simple or easy matter, but in all systemic infections of obscure origin the nose, mouth and throat should be carefully examined. The aid of the dentist and rhinologist will often have to be sought, and a skiagram of the face and head may be required to locate the fountain and origin of the evil.

*The treatment* that offers the greatest measure of relief from nasal and oral sepsis is necessarily prophylactic. I would not lay any claim to a knowledge of dentistry, but the physician must ever look on a blind oral abscess as he would on an appendix that is infected, a mastoid that is full of pus or a tonsil that is septic, and its removal should occur, whatever may be the dental cost.

The problem with the dentist is not only to decide when he can save his patient from losing a tooth, but he must grasp the larger and more important consideration that losing a tooth may save his patient from a serious or possibly fatal infection.

A grasp of oral pathology and health conservation will be greater assets to the dentist of the future than a mechanical skill that will produce a faultless inlay or preserve a devitalized tooth.

Billings declared carious teeth are an inexcusable evidence of faulty personal cleanliness in those who are otherwise healthy.

I believe children, parents and other individuals should be educated and impressed with the great importance of oral hygiene. They should be taught by public lectures and open sessions of medical and dental societies that enlarged and inflamed tonsils, adenoid overgrowth, carious teeth and obstructed nares are a menace to health and life and should be given treatment indicated for their relief.

Any condition of the throat and nares that induces mouth breathing predisposes to infection of the mouth and leads to dental and palatine malformations. When the obstruction has

been removed, the cooperation of the dentist should be sought that the existing malocclusion may be corrected. Also any condition in the nasal cavities that interferes with free sinus drainage should receive appropriate treatment.

When focal infection has occurred, its removal or treatment should be vigorously pursued until a cure is effected. Meanwhile the prevention of systemic infection should be aided by all the means which are known to maintain the natural defenses of the body, namely: pure air, proper food, right living, abundant sleep and avoidance of undue fatigue and all excesses.

Systemic infection having occurred, it should likewise be removed by surgical or other means if possible. Tissue resistance should be raised to combat the infection by such measures as were advocated for its prevention. Iron and other tonics may be indicated.

An autogenous vaccine will often aid in overcoming the infection by increasing the opsonic index and creating immunity.

In conclusion let me say, in the light of what is now known, no physician can justify his action, or rather inaction, who makes a diagnosis of idiopathic arthritis, neuritis or endocarditis, ceases further to investigate, and rests secure in blissful ignorance. Idiopathy is only a synonym of ignorance and no physician can afford to seek a refuge beneath its crumbling walls.

#### EVERYDAY USE OF BACTERINS\*

C. F. BRIEGLEB, M.D.  
ST. CLAIR, MO.

I say "everyday use," and that is just what I mean, for rarely a day passes that I do not inject one or more doses of bacterins. One day I became curious to know how often daily I was using them, and counting, I found that on that date I had treated nine patients, six of whom had received injections of bacterins.

One of the objects in presenting this modest paper is to register a protest against the theoretically false impression created in many minds as to the value or danger of stock vaccines, or rather bacterins, which is the correct

term and hence to be preferred, as differentiating between preparations composed of living germs, true vaccines, in contradistinction to a definitely counted number of killed germs, and these of known identity, the killed germs being called bacterins.

This is strangely at variance with what advocates of autogenous bacterins have written so extensively and have been so insistent as to the unscientific character of stock bacterins.

In further refutation of such contention we need only be reminded of the demonstrated and indisputable accomplishments of the various army surgeons of the world in their practical annihilation of their erstwhile scourge of typhoid which, until the use of stock bacterins, slew more soldiers in camp than all the bullets and shells of the enemy in trenches or on battlefields.

This may have been unscientific—may still be unscientific—but it gave results, and that is what most of us are striving for and what is demanded by our patients.

Even plausible promise of results gains not only hearing but big pay as witness the various cults with their big promise and little performance.

Our way to offset them is with small promise but large performance. They are little concerned with the science involved. They want results.

Do not misunderstand or misquote me to be advocating unscientific procedure in our work. We should understand and as speedily as possible reduce to scientific common denominators all measures we essay to apply in our art. This is incumbent on each and every one of us; but let us remember that in the work-a-day world an ounce of art far outweighs a ton of science and many tons of pseudo-science. If treatment gives good results let us use it. Let its explanation await demonstration.

We need only reflect that the vast preponderance of our art is the result of cautious, observant empiricism which has later received the sanction—even improvement—by genuine, tried-out scientific explanation.

However, the rabid theoretical manifestoes, thou shalt not's of usurping monitors of scientific surveillance have not clinical effectiveness nor science either. Neither have they gotten us anywhere worth while as practitioners, but instead, like danger signals out of place, have done as much harm in this branch of our art as ever was done it by the absence of danger signals where such should have been placed.

Some sitting in high places and so situated as to be able to make accurate tests in laboratories under control conditions and with furnished means to publish their findings, have failed or refused to make such tests. Instead, they have on theoretical grounds condemned the use of stock preparations of bacterins as

\* In the March number of the *American Journal of Clinical Medicine*, page 77, I find reference to research work not previously known to me, by Dr. H. W. Hill, Director of the Institute of Public Health at London, Ontario (*Am. Jour. Pub. Health*, Jan., 1914) bearing on the main contention in my paper.

His assertion is: Most infections become severely virulent and dangerous to health only when the resulting lesions have become contaminated with pus-forming bacteria through associated infection; . . . it is well to remember that the chief harm is due to the strepto- and staphylococci as secondary infections . . .

It is just this clinical observation that to me has seemed to justify the wide use, and results have apparently borne me out in the therapeutic application of the omnipresent mixed infection groups of stock bacterins combined extemporaneously at the time of administration with the dominant specific infection bacterins (also stock).



"unscientific," and the use of mixed bacterins as shotgun work.

All this without basic demonstration amounts to crying "wolf, wolf" when there is no wolf.

The consequence is in the main to defeat its own unfair purpose, for many, like the writer, have not felt content to deny suffering humanity under our care even possible benefits by their cautious use, when once assured of the harmlessness of the injection of a definite and counted number of killed germs.

Then, when the predicted disasters, immediate or remote, failed to materialize and unmistakable benefits beyond that obtained by ordinary treatments did follow with such regularity and certainty as to be noticed even by laymen, the cry of "wolf, wolf" had no more terrors nor deterrent effect on us.

Next to the "hands off" or "wolf, wolf" cry by those who could and should have known better was the half-hearted use in terminal, moribund or otherwise unsuitable cases, their unfortunate and unfavorable results acted still further to prejudice such doubters and confirmed them still more in their false conclusions as well as their false premises.

The writer confesses his own scepticism in the beginning, also that he was still further and longer deterred by those in high places crying "wolf, wolf"!

In a previous paper you have been told of the writer's initiation in a dire extremity and ignominious defeat in a valiant, even heroic fight, against pneumonia with the well-tried, well-known, but with me now antiquated measures, against this king of death. I have lost some pneumonia cases since that day in February in the year 1913. But without the aid of bacterin therapy, I now know the death toll would have been far greater since that time.

Furthermore, in all this extensive use of bacteriotherapy, the writer has been diligently and conscientiously on the watch for the slightest sign of untoward effect or undesirable after-effects attributable to this form of therapy. He does not say there are none or have been none. Careful watching has, however, failed to detect any on his part or by any other than the theoretical objectors who have so far failed to substantiate their theories by practical experimentation.

On the other hand, an ever increasing number of clinicians of high standing and trustworthiness are speaking out with a boldness born of practical test and experiment and consequent conviction.

Those interested in a favorable report by men of recognized standing and laboratory or scientific connection may find two excellent and highly practical articles in the *Journal of the A. M. A.* issue of June 3, 1916. The articles confirm scientifically the conclusions arrived at by the sum total of my own crude clinical

experiences and observations, and this paper would be most incomplete without being permitted to read into it the two most excellent articles referred to contributed by Doctors Jobling and Petersen, Miller and Lusk. The reader must peruse the two references or he will miss much more than I have recorded.

Too much has, I believe, been said and written to mystify rather than to simplify this entire subject, and by the very ones to whom we have been accustomed to look for guidance. They have impressed me as being derelict in that duty. I have found much more enlightenment and help from others toward whom I feel very grateful, especially after being disappointed by those from whom I had expected help and to whom I turned first.

The subject is still met with the "icy stare" in select medical circles, or gets supercilious comment and repression instead of free and wholesome consideration and investigation. I only ask fair, thorough and exhaustive tests under control conditions, by trained observers, instead of theoretical condemnation.

Not like one prominent member of the profession in reach of unlimited clinical material and laboratory and bacteriological facilities, who, on being asked his opinion of vaccine therapy, said, "Unfavorable." When asked why, he very condescendingly explained that he had administered some forty doses without getting any results. Further inquiry indicated that his trials of vaccines were in very unfavorable conditions and after all other ordinary methods had been used in vain. Such procedure could in no sense be considered test cases nor a fair trial. Just such early use of diphtheria antitoxin, early in its history, but late in the course of the disease, gave no results and a few fools condemned it as a new-fangled German folly, and it was long in disrepute right here in our own dear midst. Every one of you can recall such instances, but I beg of you not to mention it aloud for they are not proud of such a record. They are not going to make that mistake any more, that is at least not with diphtheria antitoxin.

Gentlemen, it was a long time before all was known about diphtheria antitoxin—if it is all now known. We used to hear much about possible bad after-effects of it, some even spoke positively of bad after-effects of it. They do not any more. They go ahead and inject it unhesitatingly and early, and let the after-effects take care of themselves. In consequence myriads of lives and voices and limbs have been saved, without any significant after-effects.

Gentlemen, bacterin therapy is here to stay. It is passing through its evil days just as did the life-saver, diphtheria antitoxin, and there are very smart men right around us in whom history is repeating itself today.

Much knowledge is yet desirable in regard to

the internal actions of bacterin therapy. Same is true of mercury, x-ray and general electricity. Yet when we learn to use them safely, we do not hesitate to extend to our patients their benefits in ever increasing applications.

But we first study about them, and in that way we come to know something of them and develop a working judgment, proceeding cautiously and observantly from the known to the unknown, doing daily more and more good and less and less harm. If we should never act or move till we know all about the measures we apply, we should all instantly turn to inert statues.

How much have any of us really studied about this subject?

How many books in our libraries on bacterin therapy?

Who is to blame for what we know or do not know about it?

Whoever learns anything about any subject without giving it careful, continuous study? In the same way they think they know without an hour's study just what bacterin therapy is or is not, and likewise unreservedly condemn it.

One fundamental seems to be plain. Antibody and immunizing substances are generated in the system of non-fatal or recovered cases in the presence of the living, infecting germs, the latter having been overcome by the body defenses. In fatal cases the reverse takes place, the defenders are overcome.

Experimenters claim, and practice seems to bear it out, that the timely and proper introduction of killed germs of the same or even similar species gives rise to prompter and greater immunizing activity in the body than do the living, multiplying, virulent germs. Herein lies the apparent rationale of bacterotherapy and its success in prophylaxis or treatment.

Furthermore, it is not only reasonable but proven, that it is easier and far safer for the phagocytes, leukocytes, the remoter unassailed, hence, as yet uncrippled body cells that participate in work for immunity, to train up on dead enemies rather than on living ones that fight back as it were, and that most fiercely. Here again becomes plain the advisability, yea, the urgency of their early administration whether for prophylaxis or for therapeutics.

How can I tell what germs to inject? This I find to be the greatest puzzle and objection with most physicians for failing or refusing to use bacterins. The objection seems valid until investigation and test show the solution to be easy and near at hand—actually known to all but without apprehension, i. e., without appreciation of its relation or new application.

As how to know which germ or combination of germs to select for injection in a particular case without the use of microscope or bacteri-

ological laboratories, different observers have advanced a number of explanations, but they are happily not essential to the practical use of vaccine or bacterian therapy as all well know in regard to the wonderful use and benefits of Jennerian vaccination.

Most of us like to theorize even though immaterial as to use or acceptance, yet I believe it to be helpful in many ways, and so submit my own as food for thought. Most of our germ diseases are mixed infections or speedily become so. I believe practically all are. Some well-versed authorities say absolutely all are mixed infections, as a pure, uncontaminated infection being all but an impossibility, certainly a rare exception.

In most of our infectious or eruptive or febrile diseases the most disastrous results as a rule are due to the complications. These complicating or contaminating germs are omnipresent germs of common infections and suppurations which, together with the regional flora of the body or the soil or the surroundings, contaminate all chronic and most acute conditions of any kind. Early dispose of the omnipresent mixed infection and such other special or presumable germs as may be clinically diagnosed, and nature can in 99 per cent. of the cases take care of the rest of the invaders and with the stimulus we have furnished, establish an active immunity to all germ invaders.

I admit this is a broad statement, but it is the result of nearly four years of clinical test and observation covering some extremely gratifying work and occasionally a pleasing surprise both to me and to my patient.

My constituents are becoming fairly well educated to all phases of the new treatment as far as the average patient is concerned which covers mainly mode of administration (needle), results and price, and are nearly all willing to pay more for better and speedier relief or surer prophylaxis, all of which they are not only recognizing but demanding.

Who does not know that pure culture tuberculous infection is a most curable process—very frequently self-cured? Perhaps it is most often self-cured. Then who will dispute the advisability of keeping it pure, or rather preventing its becoming a mixed infection? Is the same not similarly or modifiedly true of all other infectious processes or whatsoever condition capable of becoming infected? May not here be found the explanation of the frequent failure of antitoxin in malignant diphtheria? It not only impresses me as plausible, but I have personally made some tests in this connection that have convinced me that the mixed infection largely constitutes such malignancy.

Along here I also find a possible cause of failure of the treatment at the hands of the "purists"—adherents to the theory that injec-



tions of mixed bacterins are unscientific, holding that tuberculosis, pneumonia, diphtheria, pertussis, etc., and their effects are due only to their specific germ and treatment should be by the single, specific bacterin and not "shot-gun" fashion, but so frequently does failure attend their efforts that these same purists are the main doubters, and for the simple reason that a quail-hunter using a shot-gun invariably bags more birds than one using a rifle. Abhorrence of "shot-gun" medication is all right in regard to promiscuous mixture of incompatible and antagonistic drugs, but the rule does not apply here for the same principles are not involved. Ordinary and proper mixture of bacterins are not incompatible nor antagonistic. On the contrary, when rightly used and combined, they have been demonstrated to be highly synergistic, and thus the purist's man of straw falls to the ground.

As a "safety first" proposition the odds certainly are with the bacterins. Is not the use of the killed germs a million times less culpable than the spraying of the throats of diphtheria carriers with living, virulent, potentially uncontrollable staphylococcus germs? Killed germs fail sometimes but it has not yet been shown that they ever give rise to disastrous results even when unjustifiably abused.

Accidental and intentional administration of enormous doses have been followed by no ascertainable bad effects more than temporary discomforts. Even the so-called negative phase has been greatly overdrawn. Personally, with ordinary caution I have never noticed it in nearly four years' use of bacterins.

Stock mixed bacterins will fail to cure some cases, so do the autogenous preparations, single or mixed. Sometimes both will fail, or either succeed where the other did not, so we must try either one or the other, on bacteriological or microscopical identification if possible, if laboratory facilities be not at hand, then use stock bacterins on clinical diagnosis without delay or loss of valuable time.

Now as to regional flora and likely mixtures. With these we are all familiar; the streptococcus and staphylococci albus, aureus, and citreus, the ordinary pus producers in all regions and all tissues with air contact. In upper air passages are found pneumococcus, micrococcus catarrhalis, and Frenkels, and influenza germs in season or epidemics. In all abdominal organs or adjacent tissues the colon bacillus, complicating any others to be found there, as typhoid, pneumococcus, gonococcus, etc., whether in stomach, duodenum, appendix, liver, gall-bladder, kidneys, ureters, bladder, prostate or rectum.

Now the matter becomes less mystifying, though one must bear in mind that all microorganisms are very migratory and cosmopolitan, and may be encountered in unexpected

places; as for example, corneal ulcer due to pneumococcus, or onychia of colon bacillus causation.

Bacterin therapy is here to stay. Will you close your eyes to its possibilities and deny your patients the benefits of its use? Their study and exploitation will prove not only interesting and entertaining but popular and profitable and vest their possessor with a gratifying sense of superpreparedness in reality.

I might consume the balance of the day in citing individual cases and instances of their services to me and my patients, highly satisfactory, indifferent, even disappointing, without exhausting my store of experiences, observations, and yearnings, but I have now imposed on your time and patience, and will only ask that it be charged to my earnest desire to share with you, my colleagues, one of the good things that has served me well and promises to do even more.

Some doubtless will like to ask questions. There is yet very much I should myself like to ask of you now or later, for I am dead anxious to know more. This represents in a measure my present views and practice which are, of course, subject to new evidence and progression. The latter are very earnestly desired.

#### MAGNESIUM OXIDE IN THE TREATMENT OF MERCURY POISONING\*

EDWIN SCHISLER, M.D.  
ST. LOUIS

Mercuric chloride owes its corrosive action to the avidity with which it combines with proteins, and all mercury compounds, so far as they are absorbed, enter the blood in the form of an albuminate.

When absorbed from a mucous membrane, or through the unbroken skin, albuminous compounds are formed.

It must not be supposed, however, that the poisonous action of mercury is dependent on the formation of protein compounds, or that saturation with albumin renders mercury inert. The albuminate itself is poisonous and may induce all the typical mercurial symptoms and death.

In acute mercuric poisoning there is a burning sensation in the mouth and throat, accompanied by constriction, which is due to the local action of the poison. When taken in concentrated solution, the mucous membrane of the mouth may appear as though it had been blistered; soon after swallowing the poison there is a pain in the stomach, and this is followed by severe vomiting. The ejected material at first consists of any food that may be in the stomach

\* Read before the St. Louis Medical Society, March 21, 1914.

and later, of mucus, frequently stained with blood. The vomiting is soon followed by purging; there may be marked hemorrhages from the bowels, as well as from the stomach, when patient's pulse becomes rapid and feeble, labored breathing, intense thirst and the urine scant or entirely suppressed, which usually contains blood, albumin and casts.

Postmortem findings in cases terminating within a few hours after admission to the hospital showed the kidneys were hyperemic and frequently hemorrhagic in spots. When the action is less rapid the condition of the kidneys resembles that of acute parenchymatous nephritis. On microscopic examination there will be found cloudy swelling and necrosis of the cortical tubules, and the interstitial tissue infiltrated with small cells.

Taking the whole series of cases which may be included in this group, which occurred in my service at the St. Louis City Hospital, sixteen cases of mercury poisoning were observed. All were women with suicidal intent, with a history of having swallowed from 3 to 170 grains of bichloride of mercury. Case No. 4 took 2 teaspoonfuls of red oxide of mercury, which is given in detail below.

*Treatment.*—All the patients received about the same treatment, deviating only in those cases which were not able to retain medication or food by mouth.

1. The emergency treatment. Gastric lavage. Milk and eggs and a saturated solution of magnesium sulphate 75 to 100 c.c. may be given, stimulation and sedatives when indicated.

2. As the results of mercurial poisoning is the cause of acute parenchymatous nephritis, the salt free diet, sweating to increase free elimination of solids and water, is indicated.

3. Magnesium oxide 30 to 60 grains was given three times a day as an antacid, which neutralizes the free acids of the stomach and secretions, with plenty of water when there was not a general edema present.

4. Olive oil, 1 tablespoonful was given three times a day, with this treatment combined with electric packs, which were only applied in the cases where the symptoms of suppression of urine would exist.

5. Decapsulation introduced by Edebohls in 1901 has been largely abandoned, more careful clinical observations following the operation have failed to show an improvement.

Eleven patients were discharged as cured after an average stay of eleven days in the hospital; the remaining five with clinical histories and necropsy report on two, are given below:

CASE 1.—M. W., aged 24, single, white, occupation, housework; entered May 21, 1913, conscious with history of having swallowed 10 large blue mercury tablets dissolved in a glass of water. Was given usual emergency treatment, when she received magnesium oxide 1 dram three times a day and olive oil 1 oz.; patient improved; on May 24, developed severe pytalism, sup-

pression of urine, blood and mucus from bowels; May 25, venesection of 1,000 c.c. was done and normal saline introduced with no result; condition of mouth grew worse, marked edema, developed urcinia and died on the ninth day. Urine: albumin large amount, granular and hyaline casts.

Autopsy report by Dr. L. Brandenberger:

Stomach and intestines show a marked corroded condition and a bluish gray appearance of mucous membrane of entire surface.

Kidneys.—Both show an acute parenchymatous process.

Remarks.—In the submucosa of cecum, dark deposits of mercuric sulphide were present.

Diagnosis.—Mercuric poisoning; contributory cause, uremia.

Summary.—Patient improved and was in good physical condition when she became progressively worse and medication was suspended due to her intense pytalism.

CASE 2.—E. H., aged 18, single, white female, entered June 30, unconscious, with a history of having swallowed 100 mercury tablets; was given emergency treatment, vomited very frequently, much blood in vomitus and stools; temperature subnormal, pulse rapid and weak; developed total suppression of urine; unable to retain nourishment or medication; died two days after admission.

CASE 3.—R. E., aged 19, single, entered October 22, with history of taking three large mercury tablets, conscious, vomiting and severe pain in stomach. Developed suppression of urine, unable to retain anything by mouth, with hemorrhage from bowels; grew progressively weaker and died on the sixth day.

CASE 4.—B. S., aged 14, white female, entered September 18, with history of taking two teaspoonfuls of red oxide of mercury; became violently ill, vertigo, with severe pains in stomach; (was given 1 pint of milk by her mother which remained in stomach a short time and was expelled by forceful vomiting; emesis contained milk with blood which lasted for some time), entered hospital three hours after, semi-conscious, irrational and in a very grave condition. Stomach was washed with warm water, the whites of two eggs with 1 pint of milk was introduced by tube. Developed total suppression of urine the next day when 1,000 c.c. of Fischer's<sup>1</sup> solution was given intravenously with no result. On the fourth day patient was put in electric pack with good result and voided about two ounces of urine. On the eighth day she lapsed in uremic coma, considerable hemorrhage from bowels and stomach; died on the tenth day.

Urine.—1.015, albumin very large amount, many granular and hyaline casts.

CASE 5.—H. R., aged 20, widow; entered September 21, conscious, rational, vomiting blood tinged mucus; severe pain in stomach with a history of dissolving 25 mercuric tablets in a glass of water. Vomiting continued during illness and unable to retain medication or food. Developed total suppression of urine, marked edema on the fourth day; gave 750 c.c. of Fischer's solution without any marked result. Electric packs and stimulation with no result; developed hemorrhages from bowels and stomach; died on the eighth day.

Autopsy report by Dr. D. F. Hochdoerfer:

Stomach highly congested and inflamed, mucous lining of stomach a dark reddish color and edematous. Same condition found in small and large intestines; most marked in duodenum, cecum and rectum.

Kidneys.—Both show enlargement, grayish white appearance, marked congestion in pyramidal portion. All evidence of an acute parenchymatous nephritis.

2600 South Grand Avenue.

1. Fischer's solution: Sodium chlorid, 14 grams; sodium carbonate (crystallized), 10 grams; water (sterile), 1,000 c.c.



# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

APRIL, 1917

### EDITORIALS

#### OPTOMETRY AND OTHER OBJECTIONABLE BILLS DEFEATED

The legislature adjourned at noon, Monday, March 19, without passing any of the bills that were opposed by organized medicine. This is a splendid victory for the profession, and shows what can be done by united and harmonious activity.

The advocates of the optometry bill managed to enlist the interest of Senator John D. Taylor of Chariton County, who called up the bill after the committee had reported it favorably. Senator Taylor obtained consent of the Senate to put the bill on its final passage and spoke for about fifteen minutes in favor of the bill. The vote was 14 no, 9 yes.

The other bills defeated are: the Chiropractic Bill and the bill to create three medical examining boards. The Chiropody Bill died in committee. The bill to establish a central board of control for the eleemosynary institutions passed the House with only three dissenting votes, but met with violent opposition in the Senate. Our committee and other members made several trips to Jefferson City to urge the passage of the bill, and at one time there seemed to be bright prospects for its passage. The opponents of the measure, however, managed to block its progress whenever its friends attempted to obtain a vote on it, and it was finally side-tracked along with many other bills, some good, some bad.

The Workmen's Compensation Bill had a somewhat fitful career. On February 23 the House refused to engross it by a vote of 55 yes, 62 no. On February 27 that vote was reconsidered and the bill was made a special order of business for March 1, at which time it was ordered to engrossment by a vote of 122 yes, 8 no. On March 8 the bill passed the House by a vote of 120 yes, 11 no. It was made a special order of business in the Senate for March 17, but was postponed to March 19, and again postponed on that date. Thereafter it was impossible to obtain a vote on the measure and it died with the end of the session.

The bill to create a division of child hygiene under the State Board of Health was reported unfavorably by the committee in the House on February 16 and did not again come up for action. The Christian Scientists are credited with opposition to this bill because of the provision requiring medical examination of schoolchildren. Later a bill was introduced by Mr. Caldwell requiring the State Board of Health to appoint a physician in each county to conduct a medical inspection of schoolchildren during the month of August. This bill was reported favorably by the committee, but died on the calendar.

A bill providing for licensing maternity hospitals under the direction of the Board of Charities and Corrections got as far as the calendar for third reading, but died there.

For the information of the members we publish the vote in the Senate on the Optometry Bill. The vote in the House on the Optometry Bill and on the bill to create three examining boards will be published in the May JOURNAL, as we could not obtain a copy of the roll call in time for this issue. The vote in the Senate on the Optometry Bill follows:

Name	County	Vote
Peter Anderson	St. Louis City	Did not vote
John Baldwin	St. Clair	No
S. W. Bates	Jasper	Yes
Joseph H. Brogan	St. Louis City	Yes
S. E. Bronson	Christian	Did not vote
Carter M. Buford	Reynolds	No
Jas. A. Campbell	Buchanan	Yes
Chas. F. Carter	Clark	Yes
M. E. Casey	Jackson	No*
Sam B. Cook	Cole	Yes
Jesse J. Duncan	Lincoln	No
Conway Elder	St. Louis City	Did not vote
J. E. Ford	Grundy	Did not vote
A. E. L. Gardner	St. Louis	Yes
Geo. W. Glick	Holt	No*
Walter C. Goodson	Macon	Did not vote
Wallace Greene	Jackson	Yes
Frank G. Harris	Boone	No
O. S. Harrison	Dunklin	No
Michael Kinney	St. Louis City	No
R. S. McClintic	Monroe	Did not vote
Mark A. McGruder	Pettis	Did not vote
J. W. McKnight	Gentry	Yes
Von Mayes	Pemiscot	No
Robt. J. Mitchell	Lawrence	No
Edwin L. Moore	Barton	No
John F. Morton	Ray	Yes†
David W. Stark	Cass	Did not vote
John D. Taylor	Chariton	No*
Frank B. Warner	St. Louis City	Did not vote
Lee Welch	Howell	No
Thos. B. Whitledge	Ste. Genevieve	Did not vote
Adolph C. Wiget	St. Louis City	Did not vote
Henry J. Yancey	Cooper	No

\* Voted yes on roll call but changed to no.

† Voted no on roll call but changed to yes.

## THE SPRINGFIELD SESSION

The arrangements for the Springfield session have been almost completed. The general sessions will be held in the Landers Theater, the House of Delegates will meet in the Colonial Hotel, the Council will meet in the Physicians' Club Rooms in the Woodruff Bldg., and the Secretaries' Association will hold its session in the Physicians' Club Rooms at an hour not in conflict with the Council meeting. The exhibits will be placed in the lobby of the Colonial Hotel, which will be headquarters.

The preliminary program is published in this issue. The committee has limited the number of papers to thirty-six. Last year the program contained so many papers that the discussion was discontinued before all the papers had been read, and quite limited on most of the other papers.

### HOTELS AND RATES (ALL EUROPEAN PLAN)

Colonial Hotel: Rooms without bath, \$1.00 to \$1.50 for one person. Each additional person, \$1.00. Rooms with bath, \$2.00 to \$3.00 for one person. A reasonable charge will be made for each additional person.

Sansone Hotel: Rooms \$1.00 per day and up.

Marquette Hotel: Rooms (all with private bath) \$1.00 per day and up.

Rooms are available at the Y. M. C. A., Jefferson Hotel and the Keystone Hotel at 50 cents per day and up.

The committee of arrangements at Springfield will have a list of rooms in private homes for the use of members who do not wish to go to hotels. Springfield is well equipped to care for all members who attend the meeting, but we suggest that advance reservations be made at the hotels or through the committee of arrangements, so that accommodations may be ready on arrival. Address Dr S. A. Johnson, chairman of the Committee on Arrangements, 801 N. Jefferson St., Springfield, Mo.

## THE SAFETY-ZONES OF OUR CITY STREETS AS DETERMINED BY THE BACTERIOLOGISTS

It has been remarked that culture places a limit to which human endeavors may attain by rendering the environment unsafe. We therefore looked with no little interest at the report of the recent analysis of the dust of the city streets of St. Louis. The coming of the auto was heralded by some few jests about the hopeless outlook for the ubiquitous sparrow, and one would have thought that with a substitution for "white wings" in terms of "fly-cop," and for the unsanitary horse in terms of gasoline combustion products, our city streets would have been rendered reasonably safe for the plebian

pedestrian. It has long been recognized that the gutter is safer than the center of the street and this has been substantiated directly by the involuntary experiments on the part of our citizens, and indirectly by elimination, through natural selection, of the variety of chicken (*Gallus*) that crosses the road.

The scientist has demonstrated that the dust from the center of the street enjoys a richer flora in proportion of 100 to 79 over the gutter and one is likely to believe off-hand that he has but substantiated the aforementioned rule of safety. Such is not the case, however, for more disease producing germs lurk in the shadows of the gutter by some twenty per cent. This increase must be accounted for in some way and either we must assume that sidewalk sweepings contribute to the higher streptococcus content or that our worthy citizens have been educated to spit into the gutter rather than on the sidewalk. The chances are, however, that analysis of sidewalk dust would show even higher count and make the center of the street, bacterially speaking, a relatively safe place. We hasten to reassure our more nervous friends that this must be qualified because the accompanying high buildings in the picture make for wind eddies and the dust of street center, gutter and sidewalk is thoroughly mixed before being presented at the portals of our respective respiratory tracts. The chances therefore are about the same no matter where you walk.

All modern evils are charged to the automobile but the higher count in colon bacilli in the center of the street cannot well be laid to its back door.

The proposition after all is not "where shall we walk to be safe?" but "why walk?"

A. G. P.

## HOW THE COUNCIL ON PHARMACY AND CHEMISTRY TESTS THE THERAPEUTIC VALUE OF DRUGS

Those who criticize the work of the Council on Pharmacy and Chemistry are wont to say that this body, although a well-meaning one, and in a way competent to pass on certain questions, cannot pass on the therapeutic value of drugs to the clinician's satisfaction, for the reason that it is composed of laboratory workers and theorists who know little of the practical side of medicine. Recently the editor of the *Charlotte Medical Journal*, in discussing the work of the Council on Pharmacy and Chemistry, said:

"... who is the best judge after all, of the therapeutic value of medicine: a board of expert chemists, or a trained practicing physician or surgeon?"

In the belief that these critics speak without

1. The Journal A. M. A., Feb. 24, 1917, p. 629.



having informed themselves of the facts, it should be pointed out that of the sixteen members of the Council ten have the degree of M.D., and, even if not in actual practice, must be admitted to have a knowledge which makes them competent to judge the therapeutic value of medicines. Furthermore, it should not be forgotten that the following members of the Council, in view of the positions they occupy, must be admitted to be particularly well qualified to pass on the practical questions of the use of drugs in the treatment of disease:

David L. Edsall, A.B., M.D., Sc.D., Professor of Clinical Medicine, Harvard University Medical School, Boston.

A. W. Hewlett, M.D., Professor of Medicine, Leland Stanford Junior University Medical School, San Francisco.

John Howland, M.D., Professor of Pediatrics, Johns Hopkins University Department of Medicine, Baltimore.

L. G. Rowntree, M.D., Professor of Medicine, University of Minnesota, Minneapolis.

Finally, it is suggested that those who question the Council's competence to pass on practical questions should read the Council's report on Biniodol,<sup>2</sup> which is, we believe, convincing proof of the very practical character of the Council's findings. Briefly stated, the facts brought out in this report are these: A manufacturer markets a proprietary solution of mercuric iodid in oil, with the claim that in actual practice the intramuscular injection produces less pain, induration, etc., than nonproprietary solutions of the same composition. To put this claim to a practical test, the Council secured the cooperation of the Department of Dermatology and Syphilology of the Western Reserve University, cooperating with the Cleveland City Hospital, and of the Johns Hopkins Hospital. To each institution were sent three specimens, labeled 1, 2 and 3, with the information only that each was a 1 per cent. solution of mercuric iodid in oil: 1 was the proprietary; 2 was a 1 per cent. solution of mercuric iodid in oil; and 3 was made up according to the formula of the proprietary, namely, 1 per cent. of mercuric iodid and 2.5 per cent. of guaiacol in oil. Dr. H. N. Cole used these preparations in a series of cases at the Cleveland hospital and sent the Council his tabulated results. Dr. Albert Keidel used the preparations at the Hopkins hospital and similarly tabulated his results for the Council. Both physicians concluded that no one of the preparations possessed any noticeable superiority over the others. An analysis of the recorded observations also showed no superiority of the proprietary preparation over the other two.

Surely proprietary claims for drug preparations cannot be tested in a more practical way.

## AMENDMENT TO THE CONSTITUTION AND BY-LAWS

The following amendment to the Constitution and By-Laws was introduced at the 1916 session and held over under the rules until the session this year. It will be up for consideration at the Springfield meeting of the House of Delegates:

Dr. J. B. Norman of Tipton introduced an amendment to the Constitution as follows:

Amend Section 3 of Article VIII of the Constitution by striking out the word "President" in the first line of the section, and create a new section to be known as Section 4 of Article VIII, which shall read as follows:

"The President shall be elected by the Association in general session; but no person shall be eligible to the office of president who is not in attendance at that annual session or who has not been a member of the Association for at least two years."

(Signed) J. B. NORMAN,  
GUY TITSWORTH.

## MEDICAL OFFICERS' RESERVE CORPS OF THE U. S. ARMY

Many of our members have been invited to become members of the Medical Officers' Reserve Corps of the U. S. Army so that this branch of the army may have an adequate number of physicians in the service to meet any emergency that might arise. The board of examiners for the corps is preparing to hold a session at Springfield during our meeting, where candidates for membership in the Reserve Corps may be examined and thus obviate the loss of time consequent to a special trip away from home to take this examination. If the board decides to hold this session, full information concerning the examination will be conveyed to the members before the meeting takes place.

## NEW TUBERCULOSIS JOURNAL

The publication of a monthly technical journal, devoted exclusively to tuberculosis, the only one of its kind in English, is announced by the National Association for the Study and Prevention of Tuberculosis. The editorial policy of the new journal will be determined by a staff of seven experts appointed by the board of directors of the Association, consisting of Dr. Edward R. Baldwin, Saranac Lake, editor-in-chief; Dr. Lawrason Brown, Saranac Lake; Dr. H. R. M. Landis, Philadelphia; Dr. Paul Lewis, Philadelphia; Dr. M. J. Rosenau, Boston; Dr. Henry Sewall, Denver; Dr. B. S. Veeder, St. Louis.

Dr. Allen K. Krause, of Baltimore, the managing editor, is widely known as a worker in

2. The Journal A. M. A., Feb. 24, 1917, pp. 650 and 651.

the research field of tuberculosis. He recently left Saranac Lake to take charge of the new division of tuberculosis in Johns Hopkins University.

The *American Review of Tuberculosis*, as the new publication is called, is the first technical journal on tuberculosis in this country. The intention of the National Association is to make it compare favorably with similar foreign journals.

---

## NEWS NOTES

---

DR. E. F. YANCEY of Sedalia has been appointed a member of the Board of Regents of the Warrensburg Normal School.

DR. JOHN F. CHANDLER of Oregon, Mo., has been appointed county physician of Holt County. He is also physician to the County Board of Health.

DRS. EZRA KOWALSKY and W. V. SMITH of Kansas City, have been arrested charged with a criminal operation on a woman who died at St. Mary's Hospital, March 6.

DR. ALVA NAYLOR of Plattsburg was killed the latter part of February, when his automobile ran over an embankment and pinned the doctor underneath. Dr. Naylor's son was driving, but escaped without injury.

DR. J. M. BELL of St. Joseph is home on a furlough from the British army, where he has been serving in the medical corps for the past eighteen months. Dr. Bell has a captain's commission and saw service at the Dardanelles and in Egypt.

At the meeting of the Council of the St. Louis Medical Society, March 14, 1917, Dr. R. L. Thompson introduced the following resolution, which was adopted:

In view of the present shortage of salvarsan and neosalvarsan in this country and the unfortunate results from such shortage, and in view of the fact that an efficient arsenic product would be available in the market were it not for the present dangerous and unwarranted patent laws in regard to this and similar therapeutic products, the St. Louis Medical Society, in the name of humanity and in accordance with the duty imposed on its members to give its best services to the sick, protests against the present patent laws pertaining to this and similar products, and urges upon the Congress such prompt action as will make this product available.

THE usual storm of protests from commission merchants, grocers, bakers, jobbers, etc., that follows an attempt to protect the food supply of a community has developed in St. Joseph upon the introduction of an ordinance in the city council by Dr. H. Delameter, commissioners of

health. It is said that some of the members of the council are determined to pass a workable ordinance to protect the food supply of the city. The ordinance introduced by Dr. Delameter is based upon similar laws in other cities where food supplies have been made the object of municipal control. One of the grocers in St. Joseph, it is said, when protesting against the passing of the ordinance, declared that "a doctor's learning is in Latin, but that if his prescriptions were written in English they would be sheer nonsense"—a tremendous indictment against a health ordinance.

THE second examination to be given by the National Board of Medical Examiners will be held in Washington, D. C., June 13, 1917. The examination will last about one week.

The following states will recognize the certificate of the National Board: Colorado, Delaware, Idaho, Iowa, Kentucky, Maryland, North Carolina, New Hampshire, North Dakota and Pennsylvania. Favorable legislation is now pending in twelve of the remaining states.

A successful applicant may enter the Reserve Corps of either the army or navy without further professional examination, if their examination papers are satisfactory to a board of examiners of these services.

The certificate of the national board will be accepted as qualification for admittance into the Graduate School of the University of Minnesota, including the Mayo Foundation.

Application blanks and further information may be obtained from the secretary, Dr. J. S. Rodman, 2106 Walnut Street, Philadelphia.

THE dinner in honor of Dr. C. Lester Hall of Kansas City, on the completion of fifty years of practice, was one of the most enjoyable occasions that the profession of Kansas City has experienced. About 200 friends of Dr. Hall attended the dinner. A number of speeches were delivered by physicians who have known Dr. Hall for varying periods of time, and interspersed with the serious phases of the talks were many humorous anecdotes reflecting some of the characteristics of the guest of honor. These expressions and the presentation of a Swiss watch with a platinum case gave evidence of the warm affection which the members of the medical profession hold for Dr. Hall. The toasts: "The American Medical Association," by C. A. L. Reed of Cincinnati, introduced by John F. Binnie; "The Western Surgical Society," by Van Buren Knott of Sioux City, introduced by B. H. Zwart; "The Missouri State Medical Association," by J. Franklin Welch of Salisbury, introduced by George C. Mosher; "Early Years in Country Practice," by B. P. Anderson of Colorado Springs, introduced by Robert T. Sloan. Many telegrams and letters were received from friends of Dr. Hall who were unable to be present at the dinner.



## MEMBERSHIP CHANGES, MARCH

## NEW MEMBERS

Walter J. Avery, St. Louis.  
 W. L. Brandon, Broseley  
 Owen W. Cochran, Overton.  
 Ralph L. Cook, St. Louis.  
 Leon E. Dallwig, St. Louis.  
 Wm. L. Dean, St. Louis.  
 George T. Dorris, Illmo.  
 Luther J. Ferguson, Brookfield.  
 Emil E. Hein, St. Louis.  
 Walter E. Hennerich, St. Louis.  
 Martin F. Kouri, St. Louis.  
 Ernest A. Krueger, Ludlow.  
 H. A. LaForce, St. Louis.  
 John Lavan, St. Louis.  
 Robert H. Lillemann, St. Louis.  
 Edward X. Link, St. Louis.  
 H. Clay Mitchell, Lamont.  
 Edward S. Murphy, St. Louis.  
 James O. Peeler, St. Louis.  
 Guiseppe M. Pellettieri, St. Louis.  
 Fred S. Perrings, St. Louis.  
 Linus M. Ryan, St. Louis.  
 Phil H. Scherer, St. Louis.  
 Erwin R. Schmidt, St. Louis.  
 Frederick W. Shaw, Mt. Vernon.  
 Lewis C. Snell, Ritchey.  
 Samuel H. Snider, Kansas City.

## CHANGE OF ADDRESSES

David E. Hamontree, Halfway to Bolivar.  
 Roy F. Knowles, Mayview to Brunswick.  
 Patrick McGennis, City Hospital to 6000  
 Easton Ave., St. Louis.  
 Clarence M. Nicholson, St. Louis to Char-  
 lotte C. H., Va.  
 Julius Rotteck, 2623 Park Ave., to Grand  
 and Victor Sts., St. Louis.  
 S. B. Scholz, Jr., 613 Locust, to 1501 Locust  
 St., St. Louis.  
 Alma C. Smith, St. Louis to Washing-  
 ton, D. C.  
 W. E. Steele, Carthage to Kansas City.  
 G. Wheeler Wilson, St. Louis to Evansville,  
 Ind.

## REINSTATED

Clive S. McGinnis, Sedalia.

## RESIGNED

Isaac N. McNutt, Knoxville, Tenn.

## TRANSFERRED

Charles D. Johnson, Tulsa, Okla., to Okla-  
 homa Society.

Horace T. Price, Tulsa, Okla., to Oklahoma  
 Society.

J. L. Statler, Cantril, Iowa, to Iowa Society.

## DECEASED

Alva Naylor, Platte City.

## MISCELLANY

## M'INTIRE PRIZE

Last year Dr. Charles McIntire resigned the secretaryship of the American Academy of Medicine after twenty-five years of faithful service. In appreciative commemoration the American Academy of Medicine decided to raise a fund, the income of which should be expended in accordance with Dr. McIntire's suggestions. As a consequence the Academy now announces two prize offers, the prizes to be awarded at the annual meetings for 1918 and 1921, respectively.

The subject for 1918 is "The Principles Governing the Physician's Compensation in the Various Forms of Social Insurance." The members of the Committee to decide the relative value of the essays awarding this prize are Dr. John L. Heffron, Dean of the College of Medicine, Syracuse University; Dr. Reuben Peterson, Professor of Obstetrics and Diseases of Women, University of Michigan, and Dr. John Staige Davis, Professor of Pediatrics and Practice of Medicine, University of Virginia.

The subject for 1921 is "What Effect Has Child Labor on the Growth of the Body?" The members of the Committee to award this prize are Dr. Thomas S. Arbutnot, Dean of the Medical School of the University of Pittsburgh; Dr. Winfield Scott Hall, Professor of Physiology, Northwestern University, and Dr. James C. Wilson, Emeritus Professor, Practice of Medicine and of Clinical Medicine, Jefferson Medical College.

The conditions of the contests are:

(1) The essays are to be typewritten and in English, and the contests are to be open to everyone.

(2) Essays must contain not less than 5,000 or more than 20,000 words, exclusive of tables. They must be original and not previously published.

(3) Essays must not be signed with the true name of the writer, but are to be identified by a nom de plume or distinctive device. All essays are to reach the Secretary of the Academy on or before January 1st of the years for which the prizes are offered and are to be accompanied by a sealed envelope marked on the outside with the fictitious name or device assumed by the writer and to contain his true name inside.

(4) Each competitor must furnish four copies of his competitive essay.

(5) The envelope containing the name of the author of the winning essay will be opened by Dr. McIntire, or in his absence by the presiding officer at the annual meeting and the name of the successful contestant announced by him.

(6) The prize in 1918 for the best essay submitted according to these conditions will be \$100; that of 1921 will be \$250.

(7) In case there are several essays of especial merit, after awarding the prize to the best, special mention of the others will be made and both the prize essay and those receiving special mention are to become at once the property of the Academy, probably to be published in the *Journal of Sociologic Medicine*. Essays not receiving a prize or special mention will be returned to the authors on application.

(8) The American Academy of Medicine reserves the right to decline to give the prize if none of the essays are of sufficient value.

The present officers of the American Academy of Medicine are George A. Hare, M.D., Fresno, Calif., president; J. E. Tuckerman, M.D., Cleveland, president-elect; Charles McIntire, M.D., Easton, Pa., treasurer, and Thomas Wray Grayson, M.D., 1101 Westinghouse Building, Pittsburgh, secretary.—*Journal of Sociologic Medicine*.

### HEALTH INSURANCE

Health insurance and how it affects the medical profession are discussed by Alexander Lambert, New York (*Journal A. M. A.*, Jan. 27, 1917). He notices the difficulties experienced by self-respecting persons of small means in seeking to receive the best that medicine can afford, and gives a review of the health insurance bill of the American Association for Labor Legislation. Physicians are an essential part of any plan for insuring good treatment in sickness of the poor. The public has long considered it a part of the physician's duty to give his time and knowledge to charity when the very poor were concerned. This has been willingly and gladly given, but there is no reason why the profession should be overburdened without any remuneration while the rest of the public goes free in this regard. The plan of the bill proposed divides the state into districts containing a certain population which is subject to compulsory health insurance. There shall be all the necessary local funds and whole-time medical referees to decide when the insured should receive a benefit and how long it should be continued. The standards under which they shall be appointed are decided by an advisory medical board to the commission. The personal care of the insured is carried on by panels of physicians. Every legally qualified physician in the district willing to do health work may be appointed on these panels, and there is contemplated free choice of physicians practically insured within reasonable limits. Probably a limit will be assigned to the number of patients for each physician, and the choice of physicians will be subject to the willingness of the doctor to take the patient. The physicians must give the sick adequate care for ordinary needs, and the medical referee takes all the responsibility of deciding when the patient shall receive treatment or is well enough to discontinue it. The various regulations necessary in any district as regards panel physicians, dispensaries and hospitals must be supervised by the local medical committee in which these organizations are represented, and they are to cooperate with the directorate of the local fund for health insurance, and measures are provided for arbitration in cases of any dispute. In many localities, if not in all, there should be a corps of consultants to furnish second opinions when demanded by the patient, the panel physician, or by the medical or directorate of the fund. The dispensaries under this law will be places for group medicine, that is, for the gathering together of all patients and consultants. Free dispensaries will cease to exist and the medical and surgical care furnished by dispensaries will be paid for the same as other physicians are paid under the insurance act. Ample hospital accommodations must also be afforded, and patients sent to them must be attended by members of the staff who are regularly enrolled on the panels. The hospital dues are not to include the doctor's fees, and the men working under the act should receive due compensation. A state medical advisory board forms part of the general state supervision and is to be composed of representatives of the various state medical societies and the state commissioner of health. It passes on regulations relating to medical benefits, and on the relation of physicians and surgeons to the insured, and the regulations of the state health insurance are to be approved by this board. The health insurance law does not take away any of the power already possessed by the state department of health or local health department as regards sanitation and general health preservation. The proposed law broadens the field of preventive medicine and will aid the existing boards in their work. The state health insurance commission is appointed by the governor, and is composed of a chairman, a physician and a third member. The medical profession must

be represented on all committees before which their interest comes for decision. The question of remuneration for the physician is not yet decided, and the questions of payment by visitation in which the doctor treats his patient as in private practice and charges each visit is the most satisfactory, although expensive, but it is possible that a compromise between the methods of capitation and visitation may be utilized. By this, the local sick funds give a lump sum to some responsible medical society, and physicians give their services according to work done, and charge accordingly. This method is criticized by Lambert as unjust to physicians, and he suggests a remedy to prevent injustice in case that occurs, as in times of excessive morbidity. The law as proposed, he says, avoids the quarrelsome friction that has been found to occur under the health insurance laws already in force in European states. All possible disputes between panel physicians and the funds or between patients and the funds are safeguarded by arbitration committees, and the whole scheme is delegated to local organizations of funds and physicians by which the real work can best be carried out.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.  
 Webster County Medical Society, Dec. 6, 1916.  
 Platte County Medical Society, Dec. 8, 1916.  
 Cape Girardeau County Medical Society, Dec. 15, 1916.  
 Livingston County Medical Society, Dec. 16, 1916.  
 Madison County Medical Society, Dec. 17, 1916.  
 Carter-Shannon County Medical Society, Dec. 20, 1916.  
 Atchison County Medical Society, Dec. 26, 1916.  
 Linn County Medical Society, Dec. 30, 1916.  
 Clark County Medical Society, Dec. 30, 1916.  
 Benton County Medical Society, Dec. 30, 1916.  
 Chariton County Medical Society, Jan. 1, 1917.  
 Schuyler County Medical Society, Jan. 5, 1917.  
 Crawford County Medical Society, Jan. 9, 1917.  
 Adair County Medical Society, Jan. 10, 1917.  
 Dent County Medical Society, Jan. 10, 1917.  
 Mississippi County Medical Society, Jan. 16, 1917.  
 Camden County Medical Society, Jan. 23, 1917.  
 Scott County Medical Society, Feb. 13, 1917.  
 Cooper County Medical Society, Feb. 21, 1917.  
 Gentry County Medical Society, Feb. 28, 1917.  
 Marion County Medical Society, March 1, 1917.  
 Ralls County Medical Society, March 13, 1917.  
 Perry County Medical Society, March 20, 1917.

### MISSOURI STATE MEDICAL ASSOCIATION

60th Annual Session, Springfield,  
 May 14-16, 1917

#### PRELIMINARY PROGRAM

ST. LOUIS

Frederick A. Baldwin: The Colon Group as a Pathogenic Agent.  
 Francis M. Barnes and John R. Caulk: Cystoscopic Examination of the Bladder in the Psychoses.  
 Leo G. Bartels: Course and Treatment of Urethral Strictures.



Given Campbell: The Involuntary or Autonomic Nervous System; Its Influence on Our Conception and Treatment of the So-Called Neuroses.

M. B. Clopton and B. S. Veeder: Congenital Stenosis of the Pylorus; Pediatric and Surgical Aspects.

William T. Coughlin: Preservation of Arm Function After Operations for Carcinoma of the Breast.

John Green, Jr.: Treatment of Dacryocystitis in Infants.

E. H. Kessler: The Opaque Meal as a Diagnostic Aid in Gastro-Intestinal Complications; with illustrations.

J. Curtis Lyter: Treatment of Acute Rheumatic Fever.

H. W. McKay: Management of Tubo-Ovarian Infections.

J. Archer O'Reilly: Anterior Poliomyelitis.

Raymond M. Spivy: Control and Treatment of Criminal Abortion.

William H. Stauffer: Infectious Diseases of Lower Bowel; with lantern slides.

#### KANSAS CITY

John F. Binnie: Correction of Deformity Due to Complete Loss of Nose, Most of Alveolar and Hard Palate.

Clarence S. Capell: Urogenital Tuberculosis.

C. C. Conover: Intestinal Arrhythmia.

Frank D. Dickson: Certain Subacute and Chronic Joint Conditions.

W. W. Duke: Dental Sepsis and Its Relation to Systemic Disease.

George H. Hoxie: Adult Thymus.

Jabez N. Jackson: Treatment for Proclivencia.

R. H. Meade: Carcinoma of Larynx.

W. T. Reynolds: Mechanical Gallbladders.

Fred T. Van Eman: Obstetric Résumé.

#### STATE AT LARGE

A. C. Ames, Mountain Grove: Physiologic Therapeutics.

J. R. Bruce, Marshfield: Title to be announced.

Lewis C. Calvert, Weston: Title to be announced.

E. A. Dulin, Nevada: Fifty Years in the Practice of Medicine and Surgery.

Frederick R. Green, Secretary Council on Health and Public Instruction of the A. M. A., Chicago (by invitation): Health Insurance and Its Influence on the Medical Profession.

Hermion S. Major, Fulton: Title to be announced.

A. W. McAlester, Columbia: Report of Committee on Medical Education.

Frank G. Nifong, Columbia: A Plea for a County General Hospital, Standardized.

Elmer L. Parker, Excelsior Springs: Roentgen and Other Rays; Their Effect on Normal and Pathologic Tissues.

Caryl Potter, St. Joseph: Factors for Safety and Ultimate Results in Goiter Operations; with report of cases.

John D. Seba, Bland: Fallacy of Chiropractic Claims.

J. Franklin Welch, Salisbury: President's Address.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of Feb. 17, 1917

The meeting convened at 8:45 p. m., the president, Dr. Albert H. Hamel, presiding. The minutes of February 10 were read and approved.

The scientific program consisted of the following:

Dr. William T. Coughlin read a paper entitled, "The Preservation of Arm Function After Operations for Carcinoma of the Breast," illustrated with lantern slides.

Discussion by Dr. Francis Reder, Fred T. Murphy, William Leighton, Major Seelig and John D. Hayward; Dr. Coughlin closing.

Dr. Fred T. Murphy read a paper entitled, "Experiences with Infected Fractures in War."

Discussion by Drs. Theodore P. Brookes, Charles A. Stone, and Walter C. G. Kirchner; Dr. Murphy closing.

Dr. Robert M. Funkhouser reported on House Bills Nos. 376, 394, 397, 419, 546, 547, 590, 516, 646, 312 and 380 and Senate Bills Nos. 88 and 428.

A letter from the Show You Club inviting the Society to affiliate itself with this proposed centralized council of organization was referred to the Council.

Attendance 126.

#### Meeting of February 24

The meeting convened at 8:45 p. m., Vice President William H. Kerwin presiding. The minutes of February 17 were read and approved.

Dr. Norvelle Wallace Sharpe moved that the by-laws be suspended and the following resolutions adopted:

*Resolved*, That the St. Louis Medical Society desires to record its admiration for the dignity, the courage and the manliness with which Albert H. Hamel has borne the heavy sorrow imposed by the long continued illness of his wife; the unswerving fidelity with which numerous and onerous duties have been discharged; the gracious equanimity that, in the midst of a crushing grief, has never flagged. Furthermore, the St. Louis Medical Society desires to extend to its president in this his hour of bereavement a vote of heartfelt sympathy; and in evidence of sympathy and respect be it further

*Resolved*, That the St. Louis Medical Society adjourn this session immediately following the scientific program.

The resolutions were unanimously adopted by a silent rising vote.

Dr. Major G. Seelig introduced the guest of the evening, Dr. Allen B. Kanavel of Chicago.

Dr. Kanavel read a paper on the "Transplantation of Fat, Fascia, and Living Tissue in Surgery: A Report of Experiences in Various Conditions."

The secretary read a letter from Dr. E. J. Goodwin urging the members to write their representatives again, vigorously protesting against the passage of the Optometry Bill (House Bill No. 312).

Dr. Funkhouser announced that the Workmen's Compensation Bill had been reported out of committee unfavorably and would therefore fail of passage.

Dr. William H. Luedde introduced Major Henry F. Pipes, chief surgeon at Jefferson Barracks, who presented two reels of moving pictures illustrating the work of the Medical Reserve Corps of the United States Army.

Dr. Funkhouser moved that a vote of thanks be extended to Dr. Allen B. Kanavel and Major Henry F. Pipes, which was adopted.

Attendance 208.

#### Meeting of March 3

The meeting was called to order at 8:45 p. m., Dr. Albert H. Hamel presiding. The minutes of the previous meeting were read and approved.

The president expressed his thanks and appreciation for the society's kind expression of sympathy tendered him on the death of his wife.

The scientific program consisted of the following:

#### A ROENTGENOLOGICAL EVENING

A Case of Diaphragmatic Hernia (illustrated with lantern slides), Dr. Miles B. Titterton.

Gastro-Intestinal Lesions (illustrated with lantern slides), Dr. Edward H. Kessler.

Interesting Bone Lesions (illustrated with radiographs), Dr. Edwin C. Ernst.

Plates of Some Painful Conditions About the Shoulder, Dr. Marion L. Klinefelter.

The discussion was opened by Dr. Russell D. Carman and followed by Drs. Ellis Fischel, Charles A. Stone and R. Walter Mills; Drs. Titterington, Carman and Kessler closing.

The president announced that the report of the Committee on Health and Public Instruction on account of its length would not be read but would be published in the next issue of the Bulletin.

Dr. Frances L. Bishop presented an appeal from the Board of Charities and Correction for the society's support of their measures before the legislature.

On motion of Dr. Coughlin the secretary was instructed to present to the legislature the indorsement of the society.

Mr. Sidney F. Morgan, representing the American Red Cross, was extended the privileges of the floor and addressed the society on the purposes of the organization. He extended an invitation to the society to attend the open meeting at the Odeon on the evening of Friday, March 9.

On motion of Dr. Boisliniere the society indorsed the activity of the American Red Cross.

Attendance 92.

F. C. E. KUHLMANN, M.D., Secretary pro tem.

#### Meeting of March 10, 1917

The meeting convened at 8:40 p. m., Dr. Hamel presiding. The minutes of March 3 were read and approved.

The scientific program consisted of the following:  
Exhibition of cases by Dr. Martin F. Engman.

1. Pellagra in young boy; condition much improved through correction of diet alone.
2. Amebic infection of skin in young man.
3. Primary ring worm of the mouth in adult.
4. Initial luetic lesion of finger with secondary rash on body.

Discussion by Drs. Walter C. G. Kirchner and Vilray P. Blair; Dr. Engman closing.

A paper entitled, "Ten Years of Acetone Treatment for Inoperable Cancer of Cervix," by Dr. George Gellhorn.

A paper entitled, "The Use of the Percy Method for Inoperable Cancer of Cervix," by Dr. Vilray P. Blair.

A paper entitled, "X-ray and Radium Treatment of Inoperable Cancer of Cervix," by Dr. Fred B. Hall.

General discussion by Drs. Francis Reder, Theodore P. Brookes, Henry Schwarz, Samuel E. Peden, Ella Marx, William Kerwin and Willard Bartlett; Drs. Gellhorn and Hall closing.

Dr. Frederick Baldwin reported on the chiropractic bill.

Attendance 176.

#### Meeting of March 17

The meeting convened at 8:35 p. m., Dr. Albert H. Hamel presiding. The minutes of March 10 were read and approved.

The scientific program consisted of the following:

A paper entitled "Laminectomy for Various Lesions," illustrated with lantern slides, by Dr. William E. Leighton.

Discussion by Drs. Malcolm A. Bliss, Henrietta A. S. Borck, Robert E. Schlueter, Norvelle Wallace Sharpe, Charles E. Hyndman and Charles A. Stone, Dr. Leighton closing.

A paper entitled "Chronic Endometritis," by Dr. Edgar F. Schmitz.

Discussion by Drs. Grandison D. Royston, Henrietta A. S. Borck and William Kerwin, Dr. Schmitz closing.

Dr. Frederick A. Baldwin reported the defeat of the optometry bill and the probable failure of chiropractor bill, workmen's compensation bill and the bill creating a state board of control for eleemosynary institutions.

Dr. Martin F. Engman called attention to the shortage of salvarsan and neosalvarsan in this country and the fact that an efficient product would be available were it not for the present dangerous and unwarranted patent laws in regard to it. He also read a letter from Dr. Jay F. Schamberg, director of the Dermatological Research Laboratories, relative to the question of the laboratories again supplying arsenobenzol.

It was moved that a committee of three be appointed to draw up resolutions to be presented to the representatives and senators in Congress looking toward the suspension or abrogation of patents on salvarsan in the event of a declaration of war. Carried. The chair appointed Drs. Martin F. Engman, J. Curtis Lyter and Cyrus E. Burford on the committee.

Attendance 122.

#### Meeting of the Council, March 14

The meeting was called to order at 8:35 p. m., Dr. Albert H. Hamel presiding. The minutes of the previous meeting were read and approved. After routine business, Dr. Thompson presented the following resolution:

In view of the present shortage of salvarsan and neosalvarsan in this country, and the unfortunate results from such shortage, and in view of the fact that an efficient arsenic product would be available in America were it not for the present dangerous and unwarranted patent laws in regard to this and similar therapeutic products, the St. Louis Medical Society, in the name of humanity, and in accordance with the duty imposed on its members to give its best services to the sick, hereby protest against the present patent laws pertaining to this and similar products, and urge upon Congress such prompt action as will make this product available. On motion the resolution was adopted.

A letter from Frederick C. Volquarts, general manager of Paul Goering & Co., advertising counselors and publishers, relative to a classified directory of business concerns, professional people, fraternal orders, institutions, churches and associations, was read. It was decided that to insert one's name in the proposed directory would be a violation of Chapter 2, Section 4, of the Principles of Medical Ethics of the American Medical Association. On motion the editor was instructed to publish a notice to this effect in the next issue of the *Bulletin*.

A letter from the Show You Club inviting the society to affiliate with the proposed centralized council of organization was read and ordered filed.

A letter from Dr. Henry A. L. Rohlfing tendering his resignation was read and referred to the Membership Committee.

The Membership Committee presented a report recommending the following applicants for active membership:

William L. Dean, 2342 S. Grand Avenue; Leon Eugene Dallwig, Barnes Hospital; Herman A. LaForce, Mullanphy Hospital; John Lavan, 5723 Kingsbury; James Owen Peeler, Mullanphy Hospital.

The report of the Membership Committee was received and the applicants elected unanimously.

The reports of the Necrology and Censors Committees were received and adopted.

Dr. Frederick A. Baldwin, chairman of the Health and Public Instruction Committee, made an oral report on the legislative attempt to standardize ice cream products. On motion, the report was received.



Dr. Helmuth H. Kramolowsky made an oral report for the Hospital Committee. His report was received and the committee commended for its activity and instructed to continue the accumulation and publication of evidence. Carried unanimously.

Dr. Wenzel C. Gayler, chairman of the Library Committee, recommended that a list of the new additions to the library be published in the *Bulletin*.

The editor was instructed to publish a list of the accessions to the library and also acknowledge gifts of books and journals, etc., through the *Bulletin*.

The report of the Library Committee was received.

Dr. Richard S. Weiss presented a report for the Ethics Committee. The letter of Dr. Milton J. Hopkins relative to his alleged membership in the Medical Society of the United States, was ordered published in the *Bulletin*.

The Ethics Committee was instructed to proceed in the Guiteras matter according to the By-Laws.

The report of the Ethics Committee was received.

Dr. Robert M. Funkhouser, chairman of the Bartscher Fund Committee, reported \$5,272.80 had been invested in Byhalia and Waterford Mississippi Road District Bonds, and that there now remained in bank \$405.35. The report was received and adopted.

Dr. Phelps G. Hurford presented the treasurer's report of receipts and expenditures for the month of February, which was adopted.

The secretary was instructed to publish a new roster.

On motion, the Health and Public Instruction Committee was appointed to represent the society in the Clean-Up Week Conference.

Drs. Kane, Boisliniere and Funkhouser reported on the optometry bill.

It was moved that the secretary send a telegram bearing the signature of the entire Council to each senator from this district protesting against the passage of the optometry bill. Carried.

Councilors present: Drs. Boisliniere, Funkhouser, Gayler, Kane, Koetter, Kuhlmann, Rehfeldt, Richter, Thompson, Hamel and Seabold.

Councilors absent: Drs. Grindon, North and Schluter.

Visitors present: Drs. Frederick A. Baldwin, Richard S. Weiss, Helmuth H. Kramolowsky, William E. Holdenried, Phelps G. Hurford and Leo Bartels.

J. ALBERT SEABOLD, M.D., Secretary.

## WASHINGTON UNIVERSITY MEDICAL SOCIETY

Thirty-Eighth Meeting, Dec. 18, 1916

THE HISTORY OF INFECTION, ILLUSTRATED BY LANTERN SLIDES OF PALAEOPATHOLOGY.—By DR. ARNOLD C. KLEBS of Lausanne, Switzerland, and Washington, D. C.

Thirty-Ninth Meeting, Jan. 8, 1917

### 1. EXHIBITION OF CASES.

#### A. SPECIMEN OF OSTEOCHONDROMA OF THE FEMUR.—By DR. E. P. LEHMAN.

The specimen presented is from a patient of 40 years, male, whose clinical history is briefly as follows:

Onset three years previous, constant pain in the upper right thigh, worse on exertion. Six months later first noticed a lump, same region, which has gradually increased in size and painfulness. No antecedent history of trauma; no loss of weight.

Examination shows a large round tumor of the upper right thigh, apparently surrounding the bone, elastic, fairly regular, attached to the femur; large

as a coconut. Structures in Hunter's canal are palpated traversing the tumor. Motion of the hip joint is impaired by the size of the mass rather than by its attachments. Adduction and flexion are limited. No tenderness. No evidence of embarrassment of the circulation. No evidence of metastasis in abdomen or pelvis.

Roentgen ray also showed a large tumor mass of osteoid tissue surrounding the femur, which can be traced through the shadow only indistinctly.

Specimen shown consists of a large mass of tissue containing 17 cm. of the femur. The mass measures 14 by 14 by 17 cm., weighs 2,200 grams. Lower end of the bone has been sawed through slightly obliquely; the upper end has been chiseled across about one to one-half inch below the top of the great trochanter in an approximately horizontal plane. This line of division enters the joint cavity mesially. The lateral aspect of the bone is visible except for muscular attachments. The other three aspects are embraced by a large tumor in which the bone is embedded. The surface of the tumor is lobular and nodular, being covered with adherent fascia and muscles. There is a definite capsule which can be readily stripped off. Beneath it there is a clear translucent tissue, evidently hyaline cartilage. On the internal anterior aspect is a deep oblique groove running downwards and posterior in which the structures of Hunter's canal were lodged. The specimen has been sawed across in a coronal plane, through the exposed surface of the femur. This section shows the tumor to consist in the periphery of a mass of hyaline cartilage, in which toward the center of the tumor, bone has been laid down in fine interlacing bony trabeculae. These, deeper in the tumor, collect to form cancellous bone, the latter forming the core of the tumor and fusing with the cortex of the femur, which here seems thickened and has become cancellous. The marrow cavity and lateral aspect of the femur are normal on section.

### DISCUSSION

DR. E. L. OPIE: The specimen is an excellent example of osteochondroma. The tumor has evidently begun as a mass of cartilage on the surface of the bone and with gradual increase in size endochondral bone formation has occurred at the base in contact with the shaft of the femur.

### 2. THE GROWTH ENERGY OF THE OVARIAN FOLLICLE OF THE GUINEA-PIG UNDER NORMAL AND PATHOLOGICAL CONDITIONS. I. GROWTH OF THE FOLLICLE UNDER NORMAL CONDITIONS.—By DR. L. S. N. WALSH.

The ovary seeming a rather favorable organ for quantitative estimation of tissue growth, it was our intention to analyze the growth energy of the granulosa cells in the ovaries of normal guinea-pigs and also to study the growth energy of these cells under certain pathological conditions.

The follicles were divided into groups according to their sizes, i. e., large, medium and small.

Besides these three groups a quantitative analysis of the proliferative power of mature follicles was made. To determine the growth energy large numbers of cells were counted in different ovaries and in the various types of follicles, at the same time the number of mitoses was ascertained and their percentage calculated and thus comparisons of growth energy were made possible. More than thirty-two thousand cells were counted in twelve large follicles whose average percentage of mitoses was 0.55 per cent. Fifty-five thousand cells were counted in thirty-three medium sized follicles whose average percentage of mitoses was 1.1 per cent. Forty-eight thousand

cells were counted in thirty-three small follicles whose average percentage of mitoses was 0.78 per cent. Twenty-four thousand cells were counted in six mature follicles whose average percentage of mitoses was 0.11 per cent.

We thus obtained a growth curve analogous to the one obtained by Oswald and Robertson on the embryo as a whole.

In small follicles the growth energy is low and gradually rises and reaches its maximum in medium follicles and again falls with further increase in the size of the follicle, until in large follicles it is slightly lower than in small ones and then there is an abrupt drop in proliferative power as the follicle becomes mature until in fully matured follicles the growth energy is almost at the zero point.

Localization of mitoses in granulosa cells was studied by comparison of growth energy in measured areas of cells at variable distances from the egg and by tabulation of cell rows in which mitoses occurred.

It was found that cell multiplication was greatest in the cells near the egg at all times, but that this proliferating area shows definite variations coincidentally with certain developmental changes in the follicle.

It seems probable on the basis of the data obtained in this work that the egg may furnish some stimulus to the granulosa cells.

In the study of the growth energy in two types of pathological follicles the following results were obtained: In granulosa degenerating follicles the proliferative power is lower than in normal ones of the same size and the growth energy of the living cells is directly proportionate to the number of dead cells present, i. e., the more numerous the latter the lower is the former.

Hypotypical ovaries are characterized by an early connective tissue atresia of follicles so that no large or mature follicles are formed and the ovary for the time being is sterile.

The growth energy of the granulosa cells in the follicles of such ovaries was found to be approximately the same as in normal ones of the same size and thus the failure of these follicles to grow even to medium size must be due to an increased destruction of cells and not to diminished proliferative power. That this is the case was further brought out by the finding of the end-results of such a process, namely, increased size of cavity, early involvement of the cells near the egg in cavity formation, etc., in hypotypical follicles.

The localization of mitoses follows the same laws in hypotypical as in normal follicles.

#### DISCUSSION

DR. LEO LOEB: The work of Dr. Walsh leads to some important conclusions which I wish to state very briefly.

1. The ovarian follicle is a structure in which cell proliferation continues during life. This cell proliferation is not a regenerative process, but a response to a formative stimulus, principally emanating from the ova.

2. The ovarian follicle presents a typical growth curve with an ascending and descending branch. We may assume that the ascending branch is due to the increase in the quantity of growth stimulus given off by the egg and the descending branch to increase in the difficulty of nourishing the cells in the enlarging follicle. In the mature follicle cell proliferation almost ceases owing to cytoplasmic differentiation of the granulosa cells.

3. The substance given off by the ovum is comparable to other substances given off by certain cells and influencing the growth of neighboring cells. Recognition of this relationship between cells con-

stitutes a marked advance in our knowledge of the physiology of tissues.

4. The peculiar distribution of growth energy in the follicle is the cause of the formation of the cumulus oophorus and thus makes possible the escape of the egg into the peritoneal cavity during ovulation. Thus we find in the ovary the same wonderful adaptation between structure and function which is so well known especially in the case of the sense organs, and we have explained its mechanism.

5. In the hypotypical ovaries the lack of the growth of the follicle is not primarily due to a diminution in mitotic proliferation, but to a primary solution of cell. A similar condition I found previously in the case of stationary tumors.

#### 3. STUDIES IN DIABETES MELLITUS.—By DR. WILLIAM H. OLMSTED.

A review of points in pathological physiology of diabetes and the methods of treatment in the hospital.

The blood sugar as affected by nephritis and arterial sclerosis was considered. The advantage of "green days" instead of complete starvation in mild cases was pointed out and further the advantages of an observation diet was shown. The association of diabetes mellitus with the complications of arterial sclerosis and nephritis was indicated.

#### DISCUSSION

DR. DOCK: I would like to call attention to the fact that this work recalls a very important phase in the study of diabetes. Thirty-five cases is a fairly respectable number of examples of a condition to analyze, and yet diabetes is a disease of great variety, and one interesting change in thought that has been brought about by the recent work with the starvation method of treatment has been to obliterate in the publications of a great many people, and apparently in the minds of a good many people, the differences that exist in various cases as regards severity, type, etc.

One thing is very striking about this series, and that is the large proportion of people beyond middle age with diabetes, of course, with arteriosclerosis. It has long been known that such cases are relatively benign as regards the diabetes, but, on the other hand, they are all decrepit individuals who may live for a good many years, but have a metabolism that must be very different from that of the diabetics who begin at about 20. We do not see enough of those cases. When I say "we" I mean people who are observing diabetes carefully and trying to advance the practical study and to influence the lives of diabetic patients. For the purposes of investigation and also for the benefit of the individuals, it is highly desirable that all young diabetics come under the same sort of observation, care and treatment that have been applied to the series that Dr. Olmsted has described. Those are patients who usually are not found first by doctors; unlike our old diabetics who have various other symptoms, these other patients are rarely discovered unless they happen to have life insurance examinations, or unless they go to dentists or ophthalmologists who recognize that they have diseases that probably are associated with diabetes. Unfortunately, many of those people go about taking medicines or eating gluten biscuits or doing various things that lose a great deal of time—not only lose time, but allow the condition to become more complicated—especially because the intensive study that such cases deserve cannot be carried on as well as it should be.

So I would like to call attention, especially of all those working in the outpatient department, to the fact that every patient with glycosuria should be looked on as a possible diabetic. Many of them are not, but all should go through the same routine of examination that Dr. Olmsted has mentioned.



#### 4. STUDIES IN BONE REGENERATION. THE DEMONSTRATION OF A METHOD OF INTRAVITAL STAINING OF NEW-FORMED BONE.—By DR. BARNEY BROOKS.

In 1736 an English surgeon, John Belchier, called attention to the fact that the bones of animals which had been fed on madder were colored red. Du Hamel used madder experimentally to study the growth and regeneration of bones, and in his papers, which were published during the period 1739-1760, there is much of the fundamental knowledge on this subject. James Paget in 1839 first pointed out clearly that it was only the bone which was formed during the ingestion of the madder which was stained. Since the work of Paget this experimental method has been little used.

In the present study, madder was fed to animals with bone injuries, and it was found that the new bone formed was colored a faint red color, and the preformed bone was not stained. The color-bearing substance in madder is a glucoside of alizarine. Alizarine was fed to animals with growing bone and no staining of the bones took place. The soluble derivative of alizarine, sodium alizarine sulphionate, was found to have very marked selective intravital staining properties for bone tissue.

From a series of experiments on dogs and rabbits, it was demonstrated that sodium alizarine sulphionate when given by mouth, subcutaneously, intravenously or intraperitoneally, has selective intravital staining properties, and that it stains only bone which has been but recently formed or is formed during the period the dye is in the circulation.

#### DISCUSSION

DR. LEO LOEB: In studying the literature on bone regeneration and transplantation we cannot help appreciating the great difficulty experienced by investigators in determining where the new-formed bone comes from, whether it is from the host or from the transplant. The method of Dr. Brooks may be a very valuable aid in determining that point.

I would like to ask Dr. Brooks whether, in the last specimens he showed, the pieces represented were autotransplants or homeotransplants?

#### BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society met in regular session Thursday afternoon, Feb. 22, 1917, at Butler. The meeting was called to order by the president, Dr. J. H. Fletcher. The minutes of the last meeting were read and approved. Those present were Drs. J. H. Fletcher, C. J. Allen, T. C. Boulware, T. F. Lockwood, E. G. Zey, T. W. Foster and J. S. Newlon.

A letter was read from Dr. J. T. Hornback, secretary of the Vernon County Medical Society, stating that our next district meeting will be held at Nevada, April 5, 1917.

A letter from the Program Committee was read by the secretary asking for titles of papers to be read at the state meeting in Springfield. None was offered.

The matter of the chiropractor prosecution was briefly discussed and the secretary was requested to keep in touch with the outcome of the proceedings now under way in Cass County, that of prosecution of the chiropractor at Drexel, Mo.

Dr. E. N. Chastain reported a case of shoulder presentation which was discussed by all present.

Dr. R. E. Crabtree gave an interesting report of his experiences on border duty as an army surgeon.

Dr. T. W. Foster being on the program to report a case was unprepared and Dr. J. E. Stepp on the program to report a case, was absent.

Dr. J. S. Newlon gave a report of the Cass County meeting of February 8, at which time they expressed

the desire of joining us in our district meetings but would not take definite action until their next meeting.

No other business appearing the society adjourned at 4:30 p. m. The next meeting will be held on March 29, 1917. J. S. NEWLON, M.D., Secretary.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, February 21, the president, Dr. F. Spencer, in the chair. There were seventeen members present.

The minutes of the previous meeting were read and with the exception of a slight change suggested by Dr. Fassett, were approved.

An invitation from the Jackson County Medical Society to attend a banquet given in honor of Dr. C. Lester Hall of Kansas City at Hotel Baltimore, was read and as many members as possible invited to attend.

The paper for the evening was read by Dr. W. H. Minton, entitled "Advantages and Disadvantages in Modern Laryngoscopy." Discussion by the following: Drs. W. L. Kenney, W. J. McGill, P. I. Leonard, M. J. Farber, W. C. Proud; Dr. Minton closing.

A clinical case was reported by Dr. J. J. Bansbach, on "Vesical Papilloma."

There being no further business to come before the society the meeting adjourned.

W. F. GOETZE, M.D., Secretary.

#### GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met in Dr. C. A. Bunge's office on Thursday afternoon, March 15, 1917. The following members were present: Drs. C. T. Leach, M. E. Spurgeon, John J. Ferrell, S. E. Gaston, C. A. Bunge and John D. Seba. The following visitors were present: Dr. G. A. Nieweg, Vancleave; Dr. R. M. Funkhouser, Dr. H. E. Kleinschmidt and Dr. Edgar F. Schmitz, St. Louis.

The afternoon session was devoted to clinical medicine. Five cases were examined, diagnoses made and treatment either prescribed or advised. Papers were then read by Dr. Funkhouser and Dr. Schmitz and discussed by those present.

Dr. Gaston extended an invitation that the society meet in Meta May 2, 1917. The invitation was accepted.

Dr. G. A. Nieweg, Vancleave, handed in his application. Drs. C. A. Bunge, S. E. Gaston and W. R. Ferrell were appointed as a committee to investigate Dr. Nieweg and report at the next meeting in Meta.

After this a social supper was then taken in the Blank Hotel. After supper the society met in open session in the opera house for a public health meeting. Owing to a heavy rainfall during the evening, the audience in the opera house was rather small, but those present enjoyed the public health lectures very much.

Dr. R. M. Funkhouser spoke on the necessity of medical laws and their strict enforcement.

Dr. Schmitz spoke on the present status of cancer.

Dr. Kleinschmidt spoke for the American Social Hygiene Society on the prevention of venereal diseases.

At the close of the meeting Dr. Funkhouser received a long distance phone message conveying the sad news that his brother had died in Omaha on that day. The meeting expressed their deep sympathy for Dr. Funkhouser's bereavement.

The meeting in Meta, May 2, 1917, will be held in two sessions, an afternoon and night session. The night session will be devoted to preventive medicine and will consist of lectures to the lay public.

J. D. SEBA, M.D., Secretary.

### GREENE COUNTY MEDICAL SOCIETY

The regular sessions of the Greene County Medical Society this year have been filled with interest. On January 12, the president, Dr. Wm. Rienhoff made his address which was full of good advice for the success of the society. He also outlined his policy for the year's work and if the members will give their whole support to the president during the year it is evident much good work will be done for the profession, not only locally but for the state. The state medical association meets in Springfield this year and the Greene County Medical Society is making arrangements to give the members a royal entainment.

On February 9, Dr. J. Franklin Welch, president of the Missouri State Medical Association, was with us and gave an address on "The Old and the New Medical Organization." This was an eloquent appeal to the younger members especially, to be ready to take up the responsibilities of our organization. He pointed out that it has been through the efforts of organized medicine that the standard of medical education in Missouri had been raised and that as individuals and as a society we are now sought after to assist in forming new legislation.

On February 23, Dr. C. W. Russell read a paper entitled, "Lesions of the Right Hypochondrium." The paper dealt with the etiology, pathology and diagnosis of the diseases which manifest themselves chiefly by pain in this region.

On March 9, a symposium on Infant Feeding was presented by Dr. J. C. Matthews and W. P. Patterson. This subject proved to be of especial interest to all general practitioners, as was evidenced by the general discussion which followed.

After the discussion of the scientific subject, Dr. E. J. Goodwin, secretary of the state medical association, was introduced and made a few timely remarks, first, in regard to the coming state meeting, the arrangements to which are progressing nicely, and second, because he was able to report favorable progress in the legislature on bills pertaining to medical legislation. This is further proof that the influence of organized medicine becomes more powerful the more perfect the organization is made. It should be an incentive to every eligible practitioner in the state to become members of their county society.

The following resolutions on the death of Dr. Farnsworth were adopted:

WHEREAS, In the death of Dexter B. Farnsworth the Greene County Medical Society has lost one of its most valued members; one whose counsels were always just and reasonable; and one whose record for nearly thirty years as a member of the society has been one of unfaltering faithfulness in the performance of every one of the many duties and obligations, from the highest to the lowest, imposed upon him by the society; be it

*Resolved*, That we hereby give expression to our keen sense of loss in the death of our friend and brother; and be it further

*Resolved*, That these resolutions be made a part of the permanent record of this society and that a copy be sent to the family of the deceased.

C. E. FULTON,  
C. W. RUSSELL,  
E. L. EVANS,  
O. C. HORN,  
ROBT. WILLIAMS,  
The Committee.

THOMAS O. KLINGNER, M.D., Secretary.

### JASPER COUNTY MEDICAL SOCIETY

At a meeting of the Jasper County Medical Society the following resolutions were adopted:

WHEREAS, In His all wise providence it has pleased Almighty God to remove from our midst Dr. Z. T. Blackwell; be it

*Resolved*, That we, the Jasper County Medical Society, have lost a valued member and this community an honorable citizen and efficient physician; and be it further

*Resolved*, That a copy of these resolutions be spread on our minutes, copies sent to the State Medical Journal, the Joplin *Daily Globe* and the Joplin *News Herald* for publication, and a copy sent to his family, and that in their bereavement we tender his family our sincere sympathy.

Committee on Resolutions:

S. H. MILLER, M.D.  
R. L. NEFF, M.D.  
W. H. LANYOH, M.D.

J. A. CHENOWETH, M.D., Secretary.

### MARION COUNTY MEDICAL SOCIETY

Marion County Medical Society met in Hannibal on the evening of the first Friday in March. The meeting was well attended.

Dr. J. W. Hardesty presented a paper on acute mercurial toxemia. He dealt with the early history of the drug as a destroyer of human life, reviewed the literature on the subject up to the year 1913, and reported in detail twenty-three new cases with pathologic findings and methods of treatment, comparing the end results of the different methods.

A lively discussion followed and the various members expressed much appreciation of the paper.

MARY S. ROSS, M.D., Secretary.

### NEW MADRID COUNTY MEDICAL SOCIETY

At a meeting of the New Madrid County Medical Society held at Parma, Dec. 22, 1916, the following officers were elected for 1917: President, Dr. E. E. Jones, Lilbourn; vice president, Dr. C. S. Blackman, Parma; secretary-treasurer, Dr. John H. Timberman, Marston.

In the absence of the secretary, Dr. J. D. Fakes, the president appointed Dr. E. P. Stepp to act as secretary. Those present at this meeting were Drs. Bogard and Jones of Lilbourn; Drs. Blackman and Stepp of Parma, and Dr. Bell of Morehouse.

Each member present submitted a case history of interest and a liberal discussion followed.

Lilbourn was selected as the next place of meeting.

#### Meeting of March 15

The New Madrid County Medical Society met at Lilbourn at the office of the president, Dr. E. E. Jones, Thursday, March 15. The minutes of the previous meeting were read and approved. Those present were Drs. Edward Bogard and E. E. Jones of Lilbourn; Dr. William N. O'Bannon of New Madrid; Dr. E. P. Stepp of Parma, and Dr. J. H. Timberman of Marston.

Dr. O'Bannon's paper entitled, "The Relation of the Medical Man to His Colleagues," was a careful survey of the duties we owe to one another.

Dr. Stepp reported an interesting case history.

Dr. Jones presented a case record which called out a free discussion of the epidemic of infectious diseases with which New Madrid County has been affected the past few weeks.



A resolution carried indorsing Dr. E. P. Stepp of Parma for reciprocal relation with Kentucky.

The following committee of arrangements was appointed to act with Dr. E. E. Jones in preparing for the entertainment of the Southeast Missouri Medical Association which will hold its meeting in New Madrid this spring: Drs. William N. O'Bannon and J. H. Timberman. The president named the entire personnel of the society as a reception committee.

New Madrid was selected as the next place of meeting to be held April 12, 1917.

JOHN H. TIMBERMAN, M.D., Secretary.

#### NEWTON COUNTY MEDICAL SOCIETY

The Newton County Medical Society met in Neosho, the county seat, with ten members present. All were enthusiastic that we continue to perpetuate the society and that each one present use his greatest efforts to have every doctor in Newton County belong to the society.

Dr. J. B. Hancock of Newtonia continues to be president of this society and Dr. Horace Bowers, Neosho, secretary.

HORACE BOWERS, M.D., Secretary.

#### PLATTE COUNTY MEDICAL SOCIETY

The Platte County Medical Society met at Platte City, Wednesday afternoon, February 9, at 1:30 p. m. The following members were present: L. C. Calvert, S. L. Durham, H. M. Clark, M. H. Moore, J. M. Hale, E. R. Hull, Alva Naylor and Spence Redman.

After the usual preliminary business Dr. Durham read an exceedingly interesting and unusually practical paper on "Abortion," laying special stress on the etiology and treatment. He also dwelt at some length on the increase in the number of cases of criminal abortion, without, however, offering an effective remedy therefor. The discussion on the doctor's paper was so intense and protracted that the remainder of the scientific program was dispensed with.

The secretary was ordered to write to Hon. D. A. Chesnut, setting forth the objectionable features of House Bill No. 380, and asking him to use his influence for its defeat.

The president appointed Dr. Lewis C. Calvert to read a paper at the Springfield meeting of the Missouri State Medical Association.

Dr. Alva Naylor announced his intention of removing to Plattsburg and resigned as delegate. Dr. M. H. Moore was elected to fill the unexpired term; Dr. L. C. Calvert, alternate.

It was ordered that the secretary issue a transfer card to Clinton County Medical Society to Dr. Naylor and that it be accompanied with a letter telling our brethren of his sterling worth and faithfulness to the ideals of medicine.

SPENCE REDMAN, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**TABLETS SODIUM CHLORIDE AND CITRATE-SQUIBB** (DR. MARTIN H. FISCHER).—Each tablet contains sodium chloride 1 Gm. and sodium citrate 2 Gm. E. R. Squibb and Sons, New York.

**OPTOCHIN.**—**ETHYL-HYDROCUPREINE.**—A synthetic alkaloid closely related to quinine. It has the anti-malarial and anesthetic action of quinine, but toxic symptoms, such as tinnitus, deafness, amblyopia or amaurosis (retinitis) are more liable to occur than with quinine. Investigations indicate that the drug may be of value in the treatment of lobar pneumonia, when its safe dosage has been determined. Reports indicate that the drug is of decided value in the treatment of pneumococcic infection of the eye (ulcus corneae serpens). Optochin is insoluble in water, but may be used in 1 to 2 per cent. solution in a bland fatty oil or as an ointment. Merck and Co., New York.

**OPTOCHIN HYDROCHLORIDE.**—**ETHYL-HYDROCUPREINE HYDROCHLORIDE.**—The hydrochloride of optochin (see above). It has the therapeutic properties of optochin, but is soluble in water. For application to the eye and instillation into the conjunctival sac a freshly prepared 1 to 2 per cent. solution in water is used. Merck and Co., New York (*Jour. A. M. A.*, March 3, 1917, p. 713).

### PROPAGANDA FOR REFORM

**EFFECT OF OPIUM ALKALOIDS ON THE URETERS.**—According to D. I. Macht morphin and the opium alkaloids having a similar constitution increase the contraction and produce a greater tonicity of the ureter, whereas papaverin and the opium alkaloids constituted similarly produce a slowing or total inhibition of the contraction and relaxation of the tonus. In opium and pantopon, which contains the total alkaloids of opium, the effect of the morphin group preponderates. Ureteral colic is due to spasmodic contractions of the ureter caused by the irritating calculus and hence the use of papaverin or opium is more rational than that of morphin. Furthermore, the slighter toxicity of papaverin, its tonus lowering power and its local analgesic properties suggest its local application in spasmodic conditions of the ureter (*Jour. A. M. A.*, March 3, 1917, p. 719).

**DATING OF BIOLOGIC PRODUCTS.**—For the protection of the consumer as well as the manufacturer, the Council on Pharmacy and Chemistry has adopted a rule requiring that serums and vaccines and similar products to be accepted for New and Nonofficial Remedies must bear on each package the date of its manufacture in addition to the date required by federal law. The practice now followed by manufacturers of placing on the containers of biologic products the date beyond which these agents are not to be regarded as dependable (though in accordance with the federal law) has not been satisfactory. Except for diphtheria and tetanus antitoxin, in general there are no methods for determining the potency of serums and vaccines. At the present time, for the same material, one manufacturer will fix an expiration date of four months, others one year or even eighteen months. Obviously this lack of uniformity is unfair to the manufacturer who endeavors to supply a product as fresh as is commercially practicable and it also may lead the physician to form a false opinion regarding the potency of certain biologic products. The new rule of the Council will enable the physician to know the age of a given product when it reaches him and will permit him to judge whether or not it has been kept unduly long. Moreover, it will prove not only helpful to the conscientious manufacturer and the physician but will also safeguard the patient (*Jour. A. M. A.*, March 3, 1917, p. 728).

**ANOTHER SHORTAGE OF SALVARSAN.**—The indications are that the supply of salvarsan and neosalvarsan in this country has again reached the point of exhaustion. Congress, which made our patent law, has the power to suspend the patent on any preparation that the patentee is unable to, or does not supply, when

such suspension is in the interest of public health, and it should suspend the salvarsan patent. In the meantime it is to be hoped that the Dermatologic Research Laboratory of Philadelphia will again supply the product as it did during the previous salvarsan shortage (*Jour. A. M. A.*, March 10, 1917, p. 785).

**ICHTHYTAR.**—The Council on Pharmacy and Chemistry reports that Ichthytar was submitted by the Szel Import and Export Company with the claim that it was essentially similar to ichthyol in composition and superior to it in therapeutic properties. The statements that were submitted regarding its composition made it impossible to determine whether or not it was similar to or identical with ichthyol. No evidence was furnished in regard to its therapeutic value. On the basis of the available information the Council held the claims regarding composition and therapeutic value unsubstantiated and ichthytar ineligible for New and Nonofficial Remedies (*Jour. A. M. A.*, March 10, 1917, p. 796).

**SUCCUS CINERARIA MARITIMA.**—In agreement with the report of the Council on Pharmacy and Chemistry holding the claims made for Succus Cineraria Maritima (Walker) unfounded, the federal government charged that the claim that by dropping this preparation into the eye cataract may be cured was false and fraudulent. In February, 1916, the Walker Pharmacal Company pleaded guilty. Since the government's prosecution, brought under the Food and Drugs Act, affects only the claims made on the trade-package of a preparation, the admittedly false claims were still made in circular letters sent to physicians as late as October, 1916 (*Jour. A. M. A.*, March 17, 1917, p. 864).

**RHEUME OLUM.**—The Council on Pharmacy and Chemistry reports that Rheume Olum (The Rheumeolum Chemical Co., Seattle, Wash.) is said to be composed of camphor 7 per cent., chloral hydrate 7 per cent., menthol  $2\frac{1}{2}$  per cent., methyl salicylate 25 per cent., oil cajuput  $2\frac{1}{2}$  per cent., oleoresin capsicum, lanolin, white wax, "qs." The Council found Rheume Olum unacceptable for New and Nonofficial Remedies because the amount of the potent oleoresin of capsicum was not declared, because unwarranted therapeutic claims were made, because the name was non-descriptive of its composition and therapeutically suggestive and because the fixed formula was considered irrational (*Jour. A. M. A.*, March 17, 1917, p. 865).

**CONTROL OF INTESTINAL BACTERIA.**—A recent investigation indicates that the direct feeding of bacterial cultures of lactic acid producing organisms had almost no influence on the intestinal flora. On the other hand the administration of milk sugar (lactose) brought about a marked change in the intestinal flora. It appears therefore that the beneficent action of milk cultures is dependent on the lactose and not on the bacteria which they contain (*Jour. A. M. A.*, March 24, 1917, p. 918).

**THE SARGOL CASE.**—The exploiters of Sargol, the get-fat-quick nostrum, were found guilty of fraud and were fined \$30,000 after promising that the business would be discontinued. Sargol was made by Parke, Davis and Co. at a price of 53 cents to 78 cents per thousand tablets. Sargol was stated to contain extract saw palmetto, calcium hypophosphite, sodium hypophosphite, potassium hypophosphite, lecithin, extract nux vomica. The trial is said to have cost the United States over \$100,000. Although the business was palpably fraudulent, although the claims made for the nostrum were palpably false, the defendants were able to employ physicians to go on the stand and swear that Sargol was a "flesh builder" and "bust developer" (*Jour. A. M. A.*, March 24, 1917, p. 927).

**BETAINE HYDROCHLORIDE.**—It contains 23.8 per cent. absolute hydrochloric acid and 8 grains corresponds to about 18 minims of diluted hydrochloric acid. In solution betaine hydrochlorid dissociates into hydrochloric acid, but it is not so efficient in aiding the action of pepsin as an equivalent amount of hydrochloric acid (*Jour. A. M. A.*, March 24, 1917, p. 931).

**ACTIVE PRINCIPLE OF LEECHES.**—The principle in the buccal secretion of the leech which prevents the clotting of blood is herudin, a deuterio-albmnose (*Jour. A. M. A.*, March 24, 1917, p. 931).

## BOOK REVIEWS

**SURGERY, GYNECOLOGY AND OBSTETRICS**, March, 1917 (Chicago).

This is a voluminous number containing a total of 344 pages of reading matter. There are fourteen original articles of which a paper by Dr. William Oneal Sherman of Pittsburgh, on "The Carrel Method of Wound Sterilization: Its Use in Military, Industrial, and Civil Practice," has first position. The department of International Abstracts of Surgery fills 116 pages.

**REPORT FROM THE DEPARTMENT OF PATHOLOGY AND THE DEPARTMENT OF CLINICAL PSYCHIATRY, CENTRAL INDIANA HOSPITAL FOR THE INSANE, 1913-1914 AND 1914-1915**, Vol. VI.

Undoubtedly readers of these reports will be favorably impressed by the excellent scientific work of the hospital staff, including their educational, clinical and laboratory activities. The reports are of particular value and interest to those having a special interest in psychiatry, but they may be read with profit and interest by physicians engaged in other branches of medical practice.

G. I.

**A MANUAL OF THERAPEUTIC EXERCISE AND MASSAGE.** Designed for the use of physicians, students and masseurs. By C. Hermann Bucholz, M.D., Orthopedic Surgeon to Out-Patients, Director of the Medico-Mechanical and Hydrotherapeutic Department of the Massachusetts General Hospital, Boston. Illustrated with 89 engravings. Lea & Febiger, Philadelphia and New York, 1917.

Certain branches of the medical science have always been subjected to exploitation by irregular practitioners. The beauty specialist, tapeworm extractors and osteopathic manipulators are examples of this class. That the neglect of these branches by the profession at large is the primary cause of this invasion has been recognized for some time.

This work is a scientific exposition of a much neglected branch of therapeutics. The chapter on rest and exercise with their relation to affections of the circulatory organs is particularly good. However, it is doubtful if any but physicians and medical students can understand it. The various kinds of paralyses, neuroses and neuralgias are analyzed, together with their treatment by massage, rest, passive and active movements and other mechanical means. The author also discusses the treatment of arthritis, loss of joint function, lumbo-sacral and sacro-iliac affections, fractures, curvatures and affections of the foot.

It is a book that every practitioner should possess, especially those who resent osteopathic competition. A more general acquaintance with works of this kind within the profession would certainly work a great hardship on bone-setters and other irregular manipulators of the human frame.

W. C. G.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee  
ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

MAY, 1917

Number 5

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION COMMITTEE { W. H. BREUER, M.D., Chairman  
S. P. CHILD, M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### THE ARMY AS A LIFE VOCATION FOR MEDICAL MEN \*

THOMAS U. RAYMOND, D.M.

Colonel M. C., U. S. Army

ST. LOUIS

I was asked by the secretary of the St. Louis Society of the Medical Reserve Corps to attend this smoker and his invitation gave me much pleasure, but he then immediately proceeded with his customary promptness and precipitancy to infuse a few dregs into the wine by advising me that if I came I must say something. And the something which I must say must be such as would induce every medical undergraduate and every one of the younger members of the medical profession who might be by him persuaded into coming here tonight to immediately burn with an unquenchable desire to forthwith choose a military career and strive to enter the Medical Corps of the Regular Army. So you can readily see what I am up against and can perchance individually estimate with moderate accuracy the probable degree of my success.

Presuming, however, that there may be present here some members of the medical profession (especially younger members) who are in a receptive frame of mind with regard to their ultimate selection of a life work (or at least some who are not in an entirely nonreceptive mood) I will try to say a few things, mostly just as they occur to me, not with the object of convincing anyone against his better judgment, but with the purpose of advising him with regard to, or of recalling to his memory, actual existent facts and conditions obtaining in the military medical service of the government, which, when considered by him and weighed in the balance of his judgment, may convince him of the advisability in his own individual case of selecting such a career for his life work.

I have genuine admiration for a young man who, in these days of extensive requirements and intensive training demanded by all our standard medical schools for the attainment of the degree of doctor of medicine, owing to the enormous strides which have been made in late years in practically every branch of our profession, has the nerve and energy and determination to deliberately enter upon the long and thorny road leading to such coveted degree and to consistently stick to that road, hard as it may be, until he has attained his goal. I feel that such a young man when he attains his degree has already made a marked advance toward an adequate degree of preparedness for his life work and is already entitled to enjoy a commendable feeling of satisfaction over work well done. But if he will adequately equip himself on equality with others for the successful practice of his profession he must still gird himself anew and spend another year and a half of his valuable time in acquiring that practical knowledge which comes only from actual daily work in a hospital, at the bedside, in the operating room and in the laboratory, in direct contact with injuries, sickness and death, and under the eye and direct supervision of physicians and surgeons more learned and experienced than he and from whom he can imbibe knowledge and dexterity. And when he has actually done all of this he stands before us as the finished product of our modern medical training and is ready to proceed to the serious and important undertaking of deciding exactly what he shall do with his talents and how he shall do it. And right here is where the medical department of his nation's army wishes to place before him whatever it may possess of advantage to offer him to influence him through his judgment to devote his talents to governmental use. Should he think of entering upon the civil practice of his profession there will doubtless occur to his mind the always overcrowded condition of such practice, its oftentimes mean and meager remunerative features, its sharp and keen and constant competition, its uncertainty of continuity such as attaches to any civilian occupation or

\* Read at a "Smoker" of the St. Louis Society of the Medical Reserve Corps, Feb. 22, 1917.

business, the difficulty of securing a favorable opening anywhere and the tedious difficulty of establishing a practice, which must have as its basis the personal knowledge and hard-earned confidence of the people, even when what seems to be a favorable opening is found; the long period of time which must often elapse before any returns of moment come in or at least before returns anywhere begin to equal his monetary outlay and during which period he must have financial backing and support; the difficulties in the way of becoming associated possibly with some older and well established practitioner who may serve as a sort of stabilizer for him and occasionally drop a few crumbs of practice from his table for him to greedily devour to learn later that they were in reality only crumbs and leavings and not the real substance of lucrative practice.

And with all these thoughts in his mind he must not fail to remember that he has one possession which must always be considered perishable and precarious, and without which his entire career as a civilian practitioner would be brought to a termination and he be reduced even to possibly penury, namely, his health. Such a terrible nightmare cannot confront him in the military service, thanks to the retirement laws of a beneficent government.

Furthermore, it is reasonable to presume that every man of pride and spirit aspires to an honorable degree of social standing and to association with and recognition by people of intelligence and cultivation and refinement. If fortune smiles on a young civilian practitioner and grants him favor he may soon by faithfulness, and diligence and persistency, win from her all the beneficent success and recognition and prosperity and social standing and professional prominence which he craves, but to how many young medical practitioners do all these desirable things come, and how hardly are they many times sought after throughout a life teeming with adversities without the appearance anywhere on the way of even one distinct bright ray of success.

No! mark my word, unless the young doctor has at the time of his final medical training *unusual* opportunities awaiting him, such as are concomitant with or contingent upon birth, or wealth, or family connections or influence, the chances of his attaining marked prominence and success in civil practice are against him, although this rule like all other rules may be proven by a limited number of exceptions to it.

But now let us turn to the army medical career which is open to every young medical man, be he rich or poor, provided he can prove himself morally, physically and mentally fitted to render to his government the standard of service which is required, and is of such age that his government may reasonably expect of

him at least thirty years of service before he shall, by reason of age, become theoretically unfit for further service.

To enter the Army Medical Corps what is required of him? Briefly, he must apply to the proper authority for permission to take an examination to determine his preliminary fitness for duty in the Medical Reserve Corps (this with a view to ultimately entering the regular army), and if successful in this examination, which is held in the near vicinity of his home, he is commissioned in the Medical Reserve Corps, placed on a status of pay and ordered to Washington, D. C., where he enters upon a most excellent specialized course of instruction at the Army Medical School, the course continuing for some four to eight months according to circumstances and embracing such subjects as are particularly adapted for military surgeons. While at this school he is twice subjected to examination, and if successful in both he is at the termination of the school year commissioned as a first lieutenant in the Medical Corps of the Regular Army, and he thereafter holds a life position of trust and responsibility and fair remuneration so long as he continues to maintain himself professionally fit and does not criminally violate army regulations which in their general character are merely just and necessary, not arbitrary and useless.

He thereafter enters upon his army life, and I have hope that possibly my co-speaker, Major Pipes, may see fit to bare for your mental inspection some of the actual details and conditions of such a life in order to give you a deep insight into the every-day life of an army surgeon, a knowledge of the small but essential daily incidents and conditions in which I feel your real interest would center, and a full understanding of which would serve, to my mind, to clear up any haziness or doubts which you may have as to the advisability of embarking upon a career which, while attractive on its surface, has given to you no indication of its undercurrents and intimate conditions of professional, domestic, social and official life.

You may be a married man (or at least may hope to be) and you may feel a decided hesitancy to take your wife with you into a life of which you really know nothing in detail. If such a thing has entered your mind you are entirely safe in dismissing it, for we have women in the army, thank God, and children, and plenty of them, and I have yet to know of one who is really and honestly downright discontented. On the contrary, they absolutely love it. They love the government and its flag, and the army which upholds it; they love the domestic life and the social life, and the degree of uncertainty which exists with reference to tenure of station; they love the glamour of the life, the modest degree of pomp and glitter which



necessarily attaches to it, the wide circle of pleasing acquaintances and friendships which they make; the travel, sometimes world-wide, which occasionally falls to their lot, and the residence for greater or lesser periods in foreign lands. They love to anticipate the increased advantages which length of service and increased rank, sometimes aided by fortuitous circumstances, may bring to their officer husbands, and they do not hesitate to "stand by their guns" as it were whenever danger threatens. Experience has taught that once a woman adopts the army life she rarely turns back of her own volition.

I note in the *Army and Navy Journal* of Feb. 10, 1917, "A Plea for Contract Surgeons," in which the *wife* of an old contract surgeon sets forth with considerable clearness how the army life appeals to her. She says, in part:

"Probably each individual member of the Medical Corps feels, or at any rate, the older members feel, that the Medical Reserve Corps' active list should be recognized as part of the Medical Corps of the Army, but collectively, they oppose their admission. If they could be persuaded to project themselves mentally into the places of these men, perhaps they would change their minds. The old contract surgeons all love the army life, and it is for that reason mainly they have remained in the service all these years. How would the members of the Medical Corps feel if they were told they must leave the service? It is not that the members of the Medical Reserve Corps fear their ability to earn a living so much as it is their *disinclination to live the civilian life* that keeps them on year after year in the active service. *They enjoy the life*, with its constant changes of scene and station, *the same as do all the other officers in the Army*, for when they do not they resign and start in private practice. Their experiences on the firing line at various times certainly ought to increase their value to the government for they have been tried and have not been found wanting. Why is it then that the old contract surgeons are not drafted into the Medical Corps, despite the fact that they are beyond the age limit? So were the Dental Corps, and veterinarians beyond the age limit. Most of the members of the Medical Corps' active service list are between 40 and 50 years of age—the best years of a doctor's life—and have already served from ten to eighteen years. There are only three of the old contract surgeons, who, if admitted to the Medical Corps, would retire for age with less than thirty years' active service. It is hoped that the foregoing may present this matter in a new light to the 'powers that be.' *I am willing to confess I hate to think of leaving the Service even with its life on the border, and trust some legislation will be enacted soon which will increase my husband's status and make our stay in the Army permanent.*"

What more direct or convincing testimony could you ask as to the views of the army women on the desirability of army life than that voluntarily and earnestly set forth in this plea of the wife of a contract surgeon to be spared the distress of separation from a service which she loves? And if she, whose husband has the more or less indeterminate status of a contract surgeon, has acquired so deep a love for the service what might be the degree of con-

tentment of the wife of an officer whose status is definitely fixed for life, with assurance of steadily increasing rank and emoluments?

Young men, let me advise you that you would do well to look into this matter of adopting the army medical service as your life work, and to look into it *now, without delay*. There has never been such an opportunity as now for young medical men to enter the Army Medical Corps. We have vacancies for you. We have not always had them heretofore, and we will not always have them hereafter. The pay and emoluments are greater than they have ever been before; the opportunities for professional training in the service, for medical and surgical work, for research work, and for the pursuit of all sorts of specialties are exceedingly abundant; the possibility of attaining national and even international fame and distinction is open to you now in the Medical Corps of the Army to an even greater extent than it has ever been before and I firmly believe that no brighter, if as bright, opportunities can by any chance await you in civil life. Our Army Medical Corps has kept pace with the tremendous strides of medicine, surgery, sanitation and preventive medicine, and if you see fit to associate yourself with us you will find that it will not be permitted to you to stand still in your professional attainments at just the point where you were when you entered the service. You will find it absolutely mandatory that you progress, and I am satisfied that you would not be long with us until it would be your pleasing and earnest ambition to progress.

We already have a corps which I am pleased to believe is generally recognized as progressive and efficient, and you may find numerous members of that corps who have acquired for themselves universal recognition as authorities on certain subjects in which they have chosen to more or less specialize, as well as certain members who have, through heroic contributions to medical science, gained lasting and well-merited fame as world benefactors. And what they have done there is every reason to believe some of you may do.

The golden opportunity is yours. The goal lies ahead of you at the further end of the road I have pointed out. You have at your command the option of seeking it or not. And the road leading to it is not bordered wholly with thorns. As I have tried to make plain to you there are many roses scattered all along the way. What is offered to you has so many advantages; so few disadvantages.

The life is a busy one, a virile one, and intensely attractive once entered upon, so that one can rarely be found who ever thereafter can view with contentment his separation from it.

And when all else is said and done to induce you gentlemen to cast in your lot with us and

devote your talents to the service of your government, there still remains the soul inspiring incentive of patriotism, that eternal sacred fire which burns forever in the breasts of all true American citizens and impels them through pure love of the fatherland to lay their best gifts upon her altar. If no other motive moves you to consecrate your life and talents to your nation, let patriotism suffice.

Join us and I think you will not regret it.

Let this invitation be not in vain.

204 South Eighth Street.

---

## SYMPOSIUM ON INTESTINAL STASIS

---

### INTESTINAL STASIS—ANATOMY\*

A. G. POHLMAN, M.D.  
ST. LOUIS

I take it that my function in this symposium is to tell you not how much the anatomists know about the causal factors in intestinal stasis but how little they know. I will state in advance that anatomists still suffer from the pernicious habit of trying to explain everything on a structural basis. We do not know how a nerve conducts a stimulus or how a muscle contracts and therefore too much in the way of an explanation must not be expected of me.

Intestinal stasis is after all a more or less strictly human complaint. Animals living under reasonably normal conditions either do not appear to suffer from it, or on the basis of natural selection, those afflicted are ruled out in the struggle for survival. Experiments on the chimpanzee indicate that these animals are subject to attacks of appendicitis when placed in the abnormal cage environment, while the disease is unknown in the wild state. It would therefore be a logical thing to examine into the structure of man to find out if there are any peculiarities in his make-up which render him more susceptible to intestinal stasis; second, to look for structural failures in the digestive tract placed under the very unusual conditions of upright posture; third, to consider the variability in individuals living under the same general environment; and finally to set forth whatever structural factors have been discovered which may have a bearing on the topic.

It is of course well known that the digestive tract of the human being operates under unique mechanical conditions and that it shows faulty adaptation to the upright posture. The poor support to both active and passive bowel, and the anomalous use of the peritoneum to suspend the bowel are quite obvious. However, against

what might well start out to be a calamity oration comes the fact that human beings have been living for myriads of years in spite of these conditions, and physiological adaptation must after all have compensated for this or we would not be here. Furthermore, there does not seem to have been any material change in the structure of man since he has been known. This I offer in opposition to the idea that the appendix does not represent a rudimentary organ because it has had plenty of time to effect its complete disappearance. Gravity, however, is a factor which the physician must consider in the weakened condition of a patient and it is notorious that people get well more rapidly if kept on the horizontal.

This brings to the immediate foreground the varieties of ptoses and their influence on the movements of the digestive tract. The Roentgen-ray examination permits a very ready display of the topography of the stomach and intestines and about the first thing that strikes us is the variation in the Roentgen-ray findings when compared with those gleaned from the cadaver in the dissecting room. Many anatomists do not seem to realize that dissecting room data are obtained on individuals who have passed through the rigor and have been embalmed in the horizontal. There is little question but that the Roentgen pictures are far more valuable from a clinical standpoint, and that inferred ptoses on the basis of cadaver anatomy may after all be well within the normal limits, allowing for a physiological compensation, in the average run of individuals. Then too we find extreme displacement in the dissecting room, and not infrequently enlarged mesenteric nodes distended to the point where intestines both large and small merely form a sort of fringe on the surface of the tumor mass and without any signs of intestinal obstruction even of recent date. Personally I do not believe that the upright posture or the usually described mal-positions of viscera in themselves offer a satisfactory explanation for intestinal stasis even in those afflicted and possessed of a dilated stomach and a u-shaped colon. We all are too likely to put our finger on some one factor and hold it responsible for a multitude of sins. It must not be forgotten that people with apparently normal tracts also seem to suffer from this condition.

The length of the digestive tract is a variable quantity and in general it has been held that it bears some more or less direct relation to the character of the diet. Experiments in feeding, such as the notable ones of Roux and Schepelmann on the duck, in which the birds were followed through a long series of experiments; one group fed meat, one group mixed, and one group grain food; and the work of Babák, who fed tadpoles a variable diet and

---

\* Read at the meeting of the St. Louis Medical Society, Nov. 4, 1916.



observed the effect on the shrinkage in the length of the digestive tract when the mud-eating larva metamorphosed into the carnivorous frog: these experiments seem to substantiate this very general idea. The scheme for the mammals is that animals with a small stomach, short intestine and small cecum are carnivorous; those with small stomach, long intestine and large cecum or large stomach, long intestines and small cecum are herbivorous; while omnivorous forms such as pig and man have small stomachs, long intestines and small cecum. It is however very difficult to use this sort of information in any definite way because of the tremendous variations the one way or the other. The elephant has a short digestive tract when compared with the hippo, while in birds, according to Mitchell, the owl for example, has large ceca, while the hawk has small ceca although the diet and character of the digestive tract in the two are otherwise quite similar. The point I would make is that one must be guarded in one's interpretations and must view without prejudice work on this problem as suggested by Bean. This writer has split the human beings into a number of classes, using structural guides which I do not care to discuss this evening. He reports two very common types as the hyperontomorph and the mesoöntomorph. These two types are quite unlike, both in reference to their external anatomy as well as in reference to their respective digestive tracts. The hyperontomorph has a small, low stomach extending to the left; a small liver extending to the right; a small, short small intestine; and a long colon with a u-loop in the transverse portion. The mesoöntomorph on the contrary has a large stomach which extends to the right; a large liver projecting to the left; a large, long small intestine; and a short large intestine. The former type Bean calls the epitheliopath because he finds it susceptible to tuberculosis, insanity, pellagra, leprosy, and carcinoma, and he deduces that this lowered resistance is due largely to nutritional disturbance. The report is by no means guesswork but has been based on over 1,000 cases and over 300 post-mortems. This sort of thing has been hinted at for a number of years in a sort of haphazard manner, and I well remember myself being told as a student that the Chinaman living on a low grade diet has a large and long digestive tract. The interesting thing from an anatomist's standpoint in Bean's account is that the type of digestive tract which he assumes is the more normal, corresponds more nearly with what one would expect from the character of the teeth which has also been used as a criterion. Moreover, according to Cannon's work, it would seem that the long colon would be more favorable to the production of the condition of intestinal stasis. This suggests the contention of

Metchnikoff and of Lane concerning the uselessness of the large intestine and it may be said parenthetically in passing that the contention is certainly not sustained in comparative anatomy. It is certain that all men are not built exactly alike and it behooves us to at least pay attention to some of these researches no matter how bizarre they may appear.

The fourth and final point I would consider with you is in relation to mechanical factors, extrinsic and intrinsic, which may affect a proper peristalsis. The external factors, granting they really produce the condition, are probably to be classed as pathological, and were first described in detail by Lane. This school, and there are many who have contributed to it, maintains that kinks, adhesions and bands formed particularly in the neighborhood of the ileo-cecal valve, the gall-bladder and the sigmoid colon, produce colonic stasis in a more or less mechanical way. It is not my purpose to do other than mention this side of the subject because you are all probably more familiar with work of this nature than I am. I will merely recommend the excellent articles of Eastman and of Connell to your attention.

The regularity in the progression of the peristaltic waves suggested a timing arrangement to Keith, who, it will be remembered, did a great deal of work on the atrio-ventricular bundle. Keith decided that there must be a tissue in the intestine similar to that found in the heart bundle, which had to do with the synchrony in the peristaltic contractions. He therefore looked at the bowel from a developmental and histological standpoint and directed particular attention to the myenteric plexus. You will recall that the digestive tube is provided with an outer longitudinal and inner circular layer of involuntary muscle fibres with a sympathetic plexus (myenteric or Auerbach's) between them. The development of the muscle coats shows that they are added to in thickness from the intervening cleft or in other words that the circular coat grows in thickness from the outside and the longitudinal coat from the inside. The tissue from which both are developed is in close relation to the sympathetic nervous system. Keith believes that the undifferentiated tissue represents a sort of intermediate form between muscle and nerve—a paraganglionic mass connected with the muscle on the one hand and with the nerve tissue on the other. This tissue he regards as "nodal" tissue comparable to the atrio-ventricular bundle, and he looks for accumulations of this material in certain regions and assumes that it acts as a pace-maker for the peristaltic contractions. One center he locates at the cardiac orifice of the stomach; one at the entrance of the common bile duct; one at the duodenal-jejunal angle; one at the ileo-cecal

junction; one at the union of the proximal and distal colon; and one at the pelvic colon.

Keith sums up his views regarding ileal and colonic stasis in the following words: "In ileal stasis, the most common and the most serious of the enterostatic conditions, there is clearly some obstructive force at work in the neighborhood of the ileo-cecal junction, delaying the passage of the ileac contents. There is no well marked anatomical sphincter there comparable to the pyloric sphincter, but beyond doubt there is in the terminal portion of the ileum an elaborately organized sphincteric mechanism, and there are also peritoneal bands and folds, both of embryonic and post-embryonic origin. One can perceive that the sphincteric mechanism might become disordered, or that in the upright position of the body the peritoneal bands might produce a mechanical obstruction; in either case, an ileal stasis would result. In the majority of cases of ileal stasis there is neither evidence of a spastic sphincter nor of an obstructing band. There is clearly some other factor at work which we have not yet taken into account." . . . "Stasis of the proximal colon—of the cecum and ascending colon—may be explained by an appeal to a mechanical means or to a functional derangement of the colic musculature or to a combination of both of these factors. Sir W. Arbuthnot Lane is persuaded that the delay in the proximal colon is mainly the result of mechanical means, of prolapse of the various segments of the colon with the formation of peritoneal bands and the production of obstructing kinks. Radiograms have failed to produce evidence of obstruction situated at bands and kinks; there is no hypertrophy of the muscle coats above the site of such bands and kinks; where acute flexures of the bowel are produced experimentally, stasis does not result (Murphy and Cannon); those familiar with comparative anatomy know how much the bowel may be inflected, twisted, coiled, or acutely folded without any obstruction resulting. On the other hand the evidence is fairly complete which points to a gross derangement in the action of the musculature of the transverse, descending and iliac colons in the cases of stasis of the great bowel. There is a general agreement among clinicians that in most cases of colic constipation there is a marked increase in the tonus of these segments of the colon; in many cases the muscle has become almost spastic in its manner of working."

It must be noted in this brief summary of Keith's researches, which are naturally far from completed, first, that he is convinced in advance of a similarity in the regulation of the movement of the various segments of the digestive tract and the timing of the beat of the auricle upon the ventricle; second, that he

has ascribed to this tissue in the myenteric plexus the function of the nodal tissue in the heart. It must be remembered that the connections of the myenteric plexus to the exciter and inhibitor systems is by no means understood, and this means after all that we get back to the same old argument of the myogenic and neurogenic theory of heart-beat and both of these theories seem to come to grief embryologically where the heart pulsates before it has nervous connection and before muscle fibres can be demonstrated in it.

It may also be mentioned that Keith pays no very great attention to the antiperistalsis of the proximal colon or to the functional insufficiency of the ileo-cecal valve to liquids as demonstrated in both instances by Cannon. Personally I do not feel that there has been demonstrated anything in the anatomical line which is in the same class as that shown by the physiologists; and after all should the parasympathetic system of Keith—an intermediate form of tissue lying structurally and functionally between nerve and muscle—be fairly demonstrated, I cannot see wherein we have gained any material information regarding the relation of structure to function in producing intestinal movements.

St. Louis University School of Medicine.

---

#### THE ROENTGEN RAY IN INTESTINAL STASIS\*

EDWIN C. ERNST, M.D.  
ST. LOUIS

The value of the roentgenologic examination of the intestinal tract in suspected conditions of stasis is dependent largely upon the manner and method employed in studying this condition.

It is one of the most difficult problems in alimentary tract pathology for the roentgenologist as well as the internist to interpret correctly, even though the most thorough and careful investigation is available. The evidence of the stasis itself can be readily observed. However, the many possible etiologic factors causing such a delay in the passage of the intestinal contents is a subject very much more complex and difficult to diagnose.

Since the causative factors in intestinal stasis conditions are many, it is of the utmost importance to adopt a method of examination most suitable to the particular case in question and not merely rely upon routine examinations in all cases under observation.

By means of the opaque meal and enema, these observations are made possible. The find-

---

\* Read at the meeting of the St. Louis Medical Society, Nov. 4, 1916.



ings are based upon the duration and manner of the passage of these salts through the intestinal tract. The number of hours required for the food to reach definite anatomic landmarks is noted; for example, the terminal ileum, cecum, the ascending, hepatic flexure, transverse, splenic flexure, descending, iliac and pelvic colon. We then likewise note the complete emptying time of the colon.

We expect, of course, to find many variations in this respect even in apparently normal individuals; but repeated observations have shown us that the colon should be completely empty at the end of forty-eight hours. Otherwise a condition of stasis is to be considered as a possible factor in the causation of the toxic symptoms present and further observations are necessary from that standpoint.

With reference to extreme variations in the complete emptying of the colon, Schwarz has reported a number of cases in individuals who were apparently happy and contented with but two or three bowel evacuations during each month. The absence of toxic symptoms in such individuals can only be explained upon the basis that there are varying degrees of susceptibility to intestinal absorption. The reverse condition holds equally true in cases where the actual stasis is negligible from the clinical and roentgenologic standpoint, but where the toxic symptoms are unusually pronounced.

We will, then, begin our study of the alimentary tract, carefully noting the motility, mobility, size, shape and position of the intestines, and likewise any abnormal constrictions, filling defects, adhesions, or variations in functional activity.

Our first important step is to properly prepare the patient. This point may require a little discussion because of the fact that while some observers advocate the giving of laxatives previous to the barium meal, other workers have followed the plan of little or no preparation, thereby avoiding any unnatural irritation to the mucous membrane and likewise not overlooking any important observations with reference to traces of pathologic fecal examination still present in the colon. In other words, by following the latter method the bowel examination is made under natural conditions.

In our routine examination we seldom prescribe laxatives, believing, for the reasons given, that they are contraindicated. However, at the same time we likewise believe that in many doubtful cases additional information may be gained by examining the intestinal tract both with and without previous catharsis. In making examinations of the lower bowel by means of the barium suspended enema, of course a thorough cleansing is necessary, and this preparation should be completed about an hour previous to the examination.

With reference to the opaque salt employed

in our examinations, we have decided in favor of barium sulphate. About two ounces are usually given with the test meal; and in examinations of the stomach the amount is increased to four ounces, thoroughly mixed in two to three glasses of buttermilk.

The number of observations necessary under the fluoroscopic screen following this opaque meal are dependent largely upon the nature of the case and likewise upon the rapidity with which the bowel contents passes from one anatomic division to another. Any abnormal delay in the progress of the meal in the region of the terminal ileum, cecum, or iliopelvic colon will require more frequent observations. However, four examinations are usually made, at intervals of six, eight, twenty and forty-eight hours.

At the end of the sixth hour we expect to find most of the opaque meal in the cecum and ascending colon, although a small portion may still be found in the terminal ileum; the stomach, however, should be completely empty by this time.

If we make our next examination at the end of the eighth or tenth hour, the head of the column of barium should be found near the splenic flexure in the transverse colon. In most of the cases the colon will appear completely empty at the end of twenty-four hours.

The slides which I am now showing illustrate the above normal distribution of the barium-buttermilk meal at the hours indicated. The complete emptying time in all of these cases varied from eighteen to twenty-four hours.

In addition to the above thorough understanding of the progress of the meal, it is of equal importance to remember the various marked anatomic zones in the intestinal tract where we may expect to find a temporary delay in the normal passage of the bowel contents. The most important landmarks are to be found in the region of the terminal ileum, hepatic flexure and pelvic colon. We likewise frequently observe a momentary delay in the forward movement of the barium at the cardiac and pyloric orifices of the stomach and at the duodeno-jejunal junction of the small intestines. The research work of Keith has shown us the probably additional importance of these zones with reference to intestinal stasis. He compares the nodal tissue around the heart to the nodal tissue found controlling the various segments and zones of the digestive tract. Further reference is made to the auricular and ventricular zones of the heart; the irregularities which may occur causing heart block. Keith then compares this condition to similar disturbances which may occur in the conducting nodal system of the various zones in the intestinal tract. A similar block probably occurs at that particular point where one rhythmic zone passes into the succeeding one, and the progress of the ingesta is correspondingly delayed. The feces

are observed moving forward and backward; typical reverse peristaltic movements. Consequently, little or no progress has been made towards a complete emptying of the colon.

As to the correctness of Keith's theory, we will, of course, require further clinical evidence. Nevertheless, his conclusions are certainly interesting and their present value undoubtedly will be to stimulate further interest and more careful observations along the lines presented.

Let us now study the normal peristaltic movements of the colon. The clearly defined observations of Holzkecht have given us a very thorough understanding of the normal movements of the ingesta in the alimentary tract and the manner in which the feces pass forward until the pelvic colon is reached.

I present copies of his original drawings illustrating these mass movements very graphically. In Diagram No. 1 you will note that the transverse and ascending colon is completely filled and the peristaltic and haustral markings can be easily seen. In No. 2 these indentations have disappeared; the transverse colon seems dilated; however, the contents still remain proximal to the splenic flexure. In the third diagram there has been a marked change and we can now observe that there has been a forward movement of the ingesta from the transverse into the descending and iliac colon. The haustral markings have as yet not appeared in this distal portion of the bowel. Within ten or twenty minutes, however, they should return, as Holzkecht has shown us in the fourth diagram. The cecum and the ascending colon still contain their original contents but under normal conditions this meal should pass forward filling the transverse, which at a later time will again empty itself as above stated.

Under favorable conditions we can observe the above changes in position and outline of the colon contents during flashes of the fluoroscopic screen. Upon two occasions I have been fortunate in observing this movement en masse, which occurred very rapidly. These phenomena are not seen very frequently because they usually occur during the patient's normal meal period. The taking of food stimulates peristalsis and the movement of the colon contents en masse follows. During this time routine examinations are, as a rule, not made.

Other authors have described various contracting rings which occur at the beginning of the mass movement, believing that they are essential to the proper passage of the bowel contents toward the distal colon.

Rieder has described a similar interesting study of what he terms "large pendulum movements" of the colon, which consist of a twisting, turning and dislocation of these portions of the large bowel not having a long mesocolon. He states that these movements occur without any actual transportation of the bowel contents.

These observations have a very important bearing upon our recognition of what we may consider the normal shape, position and movement of the large bowel, and to just what limited extent we may diagnose such variations as being pathologic.

Let us, therefore, study the position of the transverse colon in the abdominal cavity under normal conditions, with special reference to the splenic and hepatic flexures. I wish first to show four normal types of extreme variations in position of the transverse colon, a few types in the region of the iliac and pelvic colon, and a number of variations in the angle and position of the splenic and hepatic flexures. All these types are described by Schwarz as being found in different individuals.

We will now return to the observations of Rieder upon the large pendulum movements of the bowel. If we will compare the many radiographs which he has taken in the same individual, at half-hour intervals, we will be impressed with the similarity of the many positions and changes in shape and outline of the colon with those of the supposed types of Schwarz in different individuals. Therefore, many of the variations in form and position which we have illustrated apparently occur in the same individual at one time or another during the passage of the barium meal.

Further comment upon this point is probably unnecessary and we must readily conclude that the position and shape of the colon does not play as important a rôle in the diagnosis of intestinal stasis as was formerly considered by the early investigators. However, on the other hand, adhesions and membranes may cause variations in position and shape; but such changes will be found to be permanent and careful palpation under the fluoroscopic screen and the examination of serial plates will help to differentiate.

The cecum will frequently be found to be firmly fixed to the abdominal wall but in a few cases may be extremely mobile. In both of these conditions a marked stasis may be present. Various membranes, veils, old inflammatory adhesions, chronic appendix, post-operative conditions, may cause such a fixation of the cecum. Similar fixations may likewise be noted in the region of the hepatic flexure due to gallbladder inflammations or to a variety of membranes called by as many different names, as Jackson's, pericolic, etc.

The ascending and the transverse colon are frequently observed to be firmly adherent to each other with the result that the hepatic angle is found to be very acute. I will now show a number of slides illustrating such conditions and likewise cases in which we found Jackson's membrane as the causative factor of the stasis and the demonstrable adhesions. In all the cases shown the ascending colon was firmly

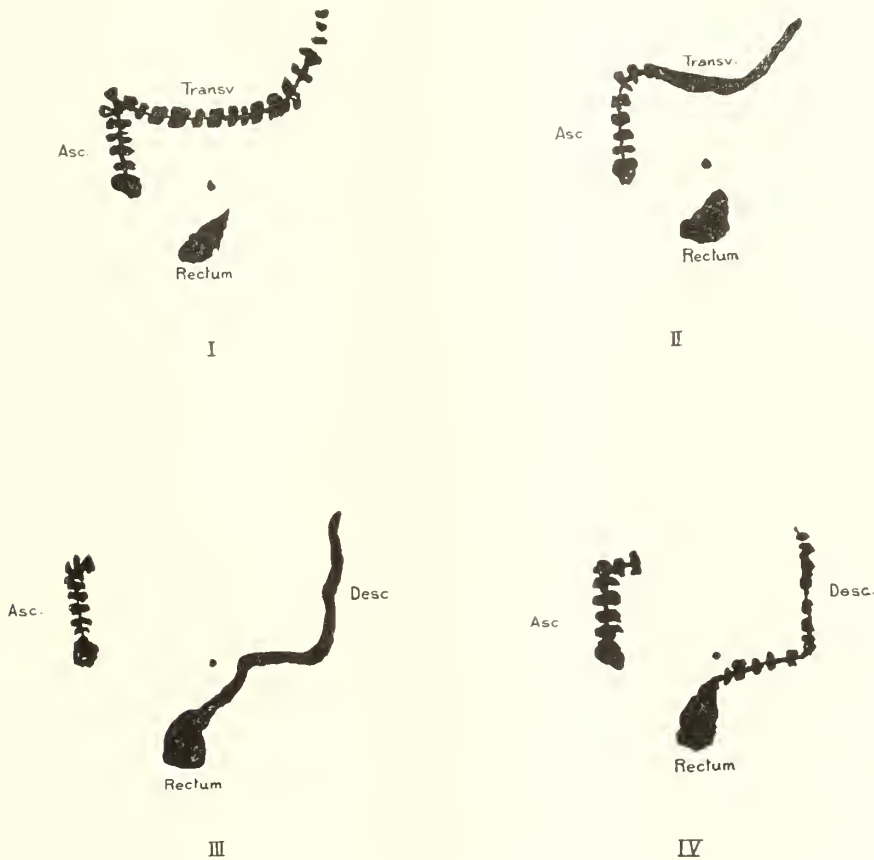


fixed, somewhat constricted, and adherent to the transverse colon; and likewise the peristaltic movements were limited and irregular. In most of the cases cited a marked improvement followed the release of these bands three and eight months following the operation. Of course a continuation of these favorable reports will be the only means of determining the ultimate and desired permanent improvement.

The splenic flexure is rather difficult to palpate because of its high attachments under the diaphragm. The descending colon can be more easily palpated; however, adhesions are rather

been reversed. Likewise, the patient frequently complains of pain as the enema reaches the obstructing area of the gut; the distal end may become dilated and the pelvic colon fail to rise high in the abdominal cavity.

Sir Arbuthnot Lane has attempted to explain the many causes for intestinal stasis from the mechanical viewpoint. He describes in detail various bands and kinks constricting the lumen of the gut in such a manner as to cause a retardation of its contents. These constricting bands were found most frequently in the region of the terminal ileum, at the junction of the ileac with



Drawings (after Holznecht) illustrating the "mass" peristaltic movement of the colon.

less frequently found here than in the distal colon; the iliac and pelvic region, where many inflammatory conditions in the pelvic are the direct causative factors.

The resulting adhesions following inflammatory processes in the region of the sigmoid are likewise difficult to palpate. The opaque enema will be found to be the most valuable method of determining the possible constrictions present and likewise help to differentiate new growths which have shown obstructive symptoms. The barium meal may pass small obstructions in the iliac and pelvic colon; however, the opaque enema usually exaggerates the actual obstruction present because the flow has

the pelvic colon, and less frequently in the region of the duodenojejunal junction of the small intestines, and also in the duodenum near the entrance of the common bile and pancreatic duct.

With reference to the frequent observations of these bands, we wish to state that in but one case have we observed such a band as the one described by Lane occurring in the region of the terminal ileum. In this particular case there remained a residue of barium in the ileum at the end of thirty hours. We were very anxious to again examine this patient three months following the operation in order to correlate the Roentgen findings with those of the

known clinical condition, which did continue to steadily improve; however, we were disappointed. The other bands and kinks described by Lane we have never observed roentgenologically.

Ileocecal valve incompetency we have observed in from one-third to one-half of the cases following the barium buttermilk enema. This patency of the valves was seen more frequently in those cases complicated with evidence of inflammatory conditions near the cecum and appendix, and likewise in marked spastic conditions of the descending and iliac colon.

We have seen from the foregoing discussion of the examination of the intestinal tract that each individual case presents a separate and distinct problem. Our old theories regarding the form and movements of the colon were surely incorrect and not in keeping with our present knowledge. The alimentary tract is no longer considered a series of compartments with anatomical boundaries and more and more evidence is being accumulated to substantiate the conclusions outlined above to show the distinct interdependence of these segment of the intestinal canal. The many reflex spasms with which we are all familiar must travel through a network of complicated nerve centers. We have been studying the chemistry of digestion, the physics of osmosis, the many test tube experiments with secretions and ferments. However, at present the mechanical factor of digestion is passing under review, receiving more and more careful attention. We are beginning to see more clearly the close relation of the nervous system with the musculature of the alimentary tract. With this information at hand we are attempting to study stasis conditions from many different angles, especially faulty muscular contractions and their possible causes.

If time permitted, I would like to show a series of intestinal stasis conditions describing in detail both the roentgenological and clinical findings, and likewise the symptomatological report following the medical and surgical treatments. However, I must limit my discussion to a few of the most frequent causes of stasis at this time.

In all of the cases shown the stasis continued for a period of from seventy-two to one hundred and twenty hours following the normal breakfast mixed with two ounces of barium sulphate.

You will observe that two distinct types are shown. In the first series the fecal accumulation is shown in the cecum and ascending colon while in the second the accumulation has occurred near the rectum. This latter condition has been termed by Hertz as "dyschesia." Such findings are not considered true constipation but rather attributed to a faulty defecation. In true constipation we are dealing with stagnation in the cecum and ascending colon. Such a condition may be due to a faulty mass movement; a defect not of one part of the colon but rather of the entire organ. There may be the

absence of the fixed point, or contracting ring, which usually is found at the proximal end of the first portion of the mass movement and is probably due to the nerve center controlling these contractions. Primarily, of course, many neurological conditions will cause a stagnation in the colon, as in hyperthyroidism, *tabes dorsalis*, *paralysis agitans*, etc.

Schwarz has studied these conditions very thoroughly and accordingly applied various names pertaining to the individual characteristics of these types. For example, in the hypokinetic type of obstipation the distal colon shows evidence of stasis; the haustral contractions are more or less absent; the pelvic colon is markedly dilated; and peristalsis can be observed only with difficulty. In the opposite type of dyskinetic obstipation, the peristalsis is very active; there is a marked hyperirritability of the transverse and descending colon. The pelvic and iliac colon may be empty, but the cecum continues to show an accumulation of feces. We would expect to find a rapid emptying of the entire alimentary tract in this latter type. However, the reverse is true. Even though there is a marked hyperactivity of the colon, the contents seem to stagnate and especially in the cecum and the ascending colon. We will frequently find reverse peristalsis, the food progressing to a certain point and then returning either to the transverse or to the cecum.

Under these conditions, at a later stage, the cecum may become dilated, while the descending and pelvic colon are markedly spastic. Likewise, the feces are frequently divided into small, isolated boluses, due to the exaggerated peristaltic waves. Schwarz has described many other distinct types; however, the above conditions are the most frequent typical combinations observed.

Conditions of stasis due to small diverticuli are frequently observed and should be diagnosed as early as possible; otherwise, the resulting pathology may prove very serious. The clinical picture frequently simulates appendiceal inflammation. In the case which I am now showing, stasis continued for 124 hours following the barium meal. The round, opaque shadows cannot be mistaken for any other condition, provided their relation to the colonic wall is established. Frequently, after the colon is empty, these diverticuli still contain barium for many days, sometimes weeks. In this case you will note the marked spastic condition of the iliac and pelvic colon.

As we have already stated, there is a distinct type in which we find a stasis in the cecum and ascending colon, accompanied by a marked spastic condition in the descending and pelvic colon. We have likewise discussed the possible pathology in these cases, and we wish to again call attention to the seat of the stasis in these conditions, the cecum and the ascending colon. However, the cause of the condition may frequently be traced to the spastic distal colon,



and the proper treatment directed toward this portion of the alimentary tract may result in a marked improvement and relieve the many symptoms, and this has been the practical result in many of the cases shown.

We also wish to show a series of cases in which there was every evidence of stasis and the clinical picture of toxic absorption, but the etiologic factors could not be discovered either from the roentgenologic or the clinical standpoint.

The functional disturbances in the alimentary tract are difficult to understand. The Roentgen evidence in such cases is ascertained by observing the increased or decreased motility of the bowel, the tonic or atonic condition of the musculature of the gut, or noting the degree of the retention.

The question of when we may consider a case one of simple constipation or obstipation is frequently difficult to answer. Likewise, to define the required number of pathological types which would be applicable to all the alimentary stasis conditions, in which the functional derangements were characteristic, would be a very difficult problem. Many of our European colleagues, however, have described many special, characteristic types. For example, the rectal stasis of Hertz, called "dyschesia"; the "Schlingenbildung" of Broedel, usually observed in the descending colon; and likewise the many types described by Schwarz, the hypokinetic and the dyskinetic types of obstipation, etc. A much more simple and at the same time more practical nomenclature is desirable, and we have accordingly followed the suggestions of Broedel in making use of the anatomic divisions of the alimentary canal in describing a particular lesion and then combining this with the functional and pathologic findings in that particular portion of the alimentary tract.

In describing stagnation in the cecum and ascending colon, we may observe two important types of stasis: the hypotonic and the hypertonic forms and their many variations. More frequently a combination of the above types will be found in the same individual.

We will first exclude the many possible mechanical causes for the stasis and then describe separately the functional characteristics of the entire colon and small bowel. The cecum, ascending, transverse, descending, iliac and pelvic colon will all be reported individually, together with the complete emptying time of the entire colon contents.

By observing and reporting the roentgenologic findings in the above manner, we believe that a more uniform basis is obtained for the careful comparison of the many types of intestinal stasis. And at the same time more practical and valuable information is thus obtained in helping the clinician establish the diagnosis and administering the proper treatment.

401 Humboldt Building.

## INFLUENCE OF INTESTINAL STASIS ON THE NERVOUS SYSTEM\*

M. W. HOGGE, M.D.  
ST. LOUIS

The nervous symptoms that seem clinically related to intestinal stasis are commonly lassitude, headache, vertigo, emotional irritability and neuralgias. More rarely, pronounced psychic disorders, coma, convulsions. Some of these symptoms seem definitely due to absorption of toxic materials from the intestinal canal; in the case of others, the rôle of irritation produced by retained fecal masses must be considered, and the relative influence of these two agencies can be properly appraised only after more definite knowledge is obtained on the subject of intestinal putrefaction, and the degree to which its products are absorbed into the blood, and of their effects after absorption.

No doubt convulsions epileptoid in character may be induced by toxic causes and by intestinal irritation, but here, as under other circumstances, the constitutional predisposition of the patient must be considered.

The present-day view of the so-called psychoneuroses, that is to say, hysteria, neurasthenia, psychasthenia, etc., is that they are definitely of psychic origin. That where they seem related to a physical disease the latter acts as an exciting or releasing, not as a truly causative agent, or else merely serves as a convenient point of attachment round which the psychic symptoms group themselves.

As regards the psychoses proper, the authorities admit the occasional occurrence of attacks due to absorption of intestinal toxins. Such attacks are of the type usually resulting from intoxication, excitement, depression or mixed states, with hallucinations and mental confusion, and do not present individual peculiarities sufficient to distinguish them from cases of the same type due to other causes. Where such attacks subside promptly on clearing out the intestinal tract, the conclusion would seem justified that intestinal stasis was the cause. Yet we must remember that the same results may occasionally follow other procedures, as chloroform or ether narcosis. Here too the constitutional predisposition of the patient must not be disregarded.

Quite commonly constipation in various degrees is present in many of the psychoses and it often happens that the intensity of the symptoms is relieved by correcting this, without however essentially influencing the progress of the mental disorder. Also, mental influences as a casual factor in inducing digestive,

\* Read at the meeting of the St. Louis Medical Society, Nov. 4, 1916.

including intestinal, disorders must not be overlooked.

The very decided influence of mental and especially emotional states upon the functions of the viscera is among the earliest of recorded biological observations, is a fact of every day experience and a common subject of laboratory studies.

It is also a usual experience that when the particular derangement under consideration is present in a neurosis or psychosis, it may vary in intensity with the nervous disorder and be recovered from at the same time, under therapeutic measures adapted principally or solely to the latter.

So that the attitude of the neurologist toward constipation is in general the same as toward other physical disorders occurring in conjunction with a nervous disease; namely, that even if the former condition be not a cause of the latter, its removal will probably facilitate recovery from it or at any rate ameliorate the symptoms. That in order to have a perfect recovery from any disorder the whole organism should as nearly as possible be restored to its normal working conditions.

Metropolitan Building.

---

#### DRUGS IN TREATMENT OF INTESTINAL STASIS\*

E. P. BUDDY, M.D.  
ST. LOUIS

The reliance on drugs in the treatment of intestinal stasis is disappointing. Many drugs are used but few are of real value. I have nothing new to offer and give simply a review of a few pharmacological facts. I have classified the drugs according to the reaction as described in *Practical Pharmacology* in the *Journal of the American Medical Association*, from which I have quoted freely.

##### EVACUANTS

Evacuants are classified according to their origin, chemical nature, intensity of action and general mode of action.

Laxative is applied to those which cause a nearly normal movement of the bowels attended with little or no pain. They act by stimulation causing increased peristalsis or by prevention of absorption causing increased bulk of stool.

##### CATHARTICS

Cathartics, purgatives (drastic and hydrogogue), I am not considering because they have

a small if any place in the treatment of intestinal stasis. Cathartics are injurious to the mucous membrane of the intestinal tract and their indiscriminate use is a cause for the loss of muscular power. This in itself is an important factor in constipation.

If intestinal movements are sluggish opportunity is afforded for the absorption of too large a proportion of fluid, the feces become hard, dry, and difficult to propel by the normal peristaltic movement. Cold water ingestion therefore would be of assistance. Laxatives by increasing the peristalsis propel the feces before they become dehydrated.

##### EVACUANTS ACTING MAINLY ON THE SMALL INTESTINES

Neutral fats and saponifiable oils, e. g., butter and olive-oil, pass practically unchanged through the stomach, but are saponified in the small intestines. The resulting soaps may be sufficiently irritating to the intestinal mucous membrane to cause increased peristalsis. Excess of fat or oil acts as mild laxatives, e. g., two teaspoonfuls of butter on an empty stomach. Castor oil yields a soap that is much more irritating. This irritating influence is usually limited to the small intestines because these soaps are absorbed into circulation before reaching the colon. This increased peristalsis in the small intestines rapidly drives the large amount of fluid into the colon, distending it and causing an evacuation before the stools become fully formed. Castor oil acts mildly even in large doses because the ricinoleic acid is liberated slowly and the more active the peristalsis the less is the time allowed for further liberation of the acid. Castor oil is not well suited because of its gradual lessening effect. Croton oil is mentioned in order to state that it may induce intestinal inflammation without purgation.

Resin anhydrides as podophyllum, colocynth, jalap, and elaterin, are more or less active evacuants acting on the small intestines, but because of their severity of action and the danger of some of them to cause enteritis, they are not considered as indicated in the treatment of stasis.

##### EVACUANTS ACTING MAINLY ON THE LARGE INTESTINES

The anthracene derivatives, as aloes, aloin, cascara, rhubarb, senna, and phenolphthalein, act on the walls of colon directly; their action is slow, usually eight hours after taking before profuse liquid stools are produced, usually with pain and tenesmus. These drugs are widely used in small doses as laxatives.

The cascara group often exert a tonic action

\* Read before the St. Louis Medical Society, Nov. 5, 1916.



on the intestines. The irritant action is so slight that they may be used in small doses for long periods without giving rise to inflammation, and the colon does not appear to habituate itself to their action so that the dose may be effective for years. With increasing obstinacy of the constipation larger doses may be called for in time, but this may be from an augmentation of the condition which gave rise to the constipation rather than from the habituation to the drugs of this group.

Cathartic doses of aloin and aloes are not especially recommended, preference being given to *cascara sagrada* and *senna*.

Sulphur forming hydrogen sulphid induces peristalsis and evacuation, but there is danger of poisoning from reabsorption.

Evacuants acting on the small and large intestines, the mercurials, such as calomel, mercury with chalk, are irritant, thereby increasing peristalsis directly and possibly also increasing secretions of intestinal glands, thus promoting more active peristalsis. Only a small amount of mercury is absorbed when evacuation is induced promptly, but when there is interference with the passage of intestinal contents the mercurial is absorbed. Mercury irritates the kidneys. The degree of irritation probably depends on the absorption of the mercury, e. g., diuresis for twenty-four or thirty-six hours following a dose of calomel is probably due to a lack of elimination through colon and reabsorption of the mercury.

Saline. When a solution of salt has passed into the intestines it retains its water of solution until its concentration has been so reduced as to be approximately equal to that of the blood. The distention of the intestines by this increased amount of fluid causes peristalsis. The salts of this group are not absolutely non-absorbable and when peristalsis is prevented the solution may be absorbed into the circulation. There have been cases reported of serious symptoms and death following large doses of magnesium sulphate which were probably due to the fact that more was absorbed than eliminated by the kidneys. This accident need not be feared except when obstruction exists, and of course no purgatives of any kind should be given in such a condition. Crystalloids attract water, hold it fast with a tendency to increase. Sodium and magnesium sulphate increase secretions of normal intestinal juices containing ferments and chemical compositions analogous to *succus-entericus*. Concentration, as 10 or 20 per cent. of sodium sulphate, will combine with large amount of gastric juice until it reaches 3 per cent. concentration and then it cannot take up more. Diluting of sodium sulphate is caused by intestinal juices.

Diarrheic stool will take place only when secretion of intestines is present.

Alkaloids. Any drug which stimulates the parasympathetic will cause intestinal peristalsis or contraction of the muscles of the intestinal wall. We have a number of such agents which either stimulate the nerve endings or increase their excitability to the normal stimuli which reach them through the blood, but these drugs have other actions which usually overshadow their action on the intestines and prevent their general use.

Pilocarpin and physostigmin stimulate the vagus and erigens which induce movements not only in the intestines but in the stomach and uterus. Physostigmin is supposed to act directly on the smooth muscle of the intestines rendering it hyperexcitable to normal stimuli, thereby promoting peristalsis. Large doses cause tonic ring-like contractions which interfere with the passage of contents. The action is overshadowed by its effects on the central nervous system. Atony in the absence of inflammation and obstruction might be an indication for its use.

Atropin. Small doses of atropin stimulate Auerbach's plexus, while large doses depress it, and all doses which have any effect depress the parasympathetic or vagus ending in the intestine. Atropin depresses the vagus endings in all the organs which it supplies and even in small doses tends to abolish those parts of the gastric, pancreatic and biliary secretions which are under nervous control.

Strychnine. Strychnine is useful in its stimulation of Auerbach's plexus.

Nicotin in extremely small doses stimulates while large doses paralyze the ganglia of the enteric system. Smoking often promotes peristalsis.

#### EVACUANTS ACTING ON RECTUM

Irritation of the rectum reflexly induces peristalsis in the colon and leads to evacuation of the feces. This is induced by suppositories and injections.

Glycerin in small amounts, one-half ounce, acts by withdrawing water from the mucosa and directly irritating nerve endings, setting up peristalsis almost at once through reflex action of the colon. Therefore the action of the glycerin is useless when given in enemas with water.

Injections of cold or warm water with or without soap or other mild irritant cause a distention and induce evacuation. Cold water in rectum usually suffices if constipation is the result of sluggishness. When feces have become hard and dry through absorption of an undue amount of their fluid the normal peristaltic movements are insufficient to drive the

contents along, especially when they are in masses. The addition of soap or alkali to the warm water, and in sufficient amount so that it penetrates into the colon, aids in softening the masses so they are more readily expelled.

A warm 5 per cent. solution of sodium sulphate is preferable to water alone for such an enema because the salt delays the absorption of the water and permits it to act on the fecal masses for a longer time. Boas oil, castor oil, and water, when injected warm and slow and retained, is very valuable in cases where the feces have become hard or impacted.

#### MISCELLANEOUS MEASURES

Efforts to overcome stasis by supplying bulk, preventing undue absorption of fluids have consisted in the giving of substances unaffected by stomach or intestines, as agar-agar, liquid paraffin, or petrolatum.

Agar-agar is a gelatine-like substance extracted from various sea weeds and has the property of absorbing and retaining water and thereby serves to increase the bulk. This is taken in 5 to 15-gram doses with water or mixed with food.

Liquid petrolatum or paraffin oil accomplishes the same purpose when administered before meals. It enters the intestines, mixes with food material thereby increasing the bulk protecting it to some extent from digestion and preventing absorption of contained water. It is colorless and tasteless, and given in 1 to 2 tablespoonfuls a half hour before meals or 1 to 2 ounces before retiring. These oils decrease to an extent the secretions of stomach and intestines.

Beechwood creosote beginning with small doses, 1 to 2 drops after meals and gradually increasing up to 8 drops, has been of value in some cases.

The aqueous extract of ipecac has been used with doubtful value.

Deficiency of bile may be an important factor in the production of intestinal atony, therefore colagogues, as ox-gall, bile salts, glyco-terrin, may prove beneficial in certain cases.

Lactic acid bacilli check the growth of putrefactive bacteria and are of value in rectal injections but are valueless when given per os because they are destroyed by the gastric juice.

Subcutaneously phenolphthalein given in 2 per cent. olive oil about 5 c.c. produces easy stool and no local reaction.

Aloin has been given subcutaneously producing action on the colon which has been painful and in rabbits has caused nephritis.

Phenoltetrachlorophthalein, according to Abel and Roundtree, when given in 2 per cent. olive oil, produces effects lasting two or three days.

#### HARMONES

Bayless and Starling termed "Secretin" a hormone formed in the duodenal mucous membrane under the influence of hydrochloric acid from the stomach. This hormone was carried by the circulation to the intestinal mucosa, pancreas, and liver, activating the production of secretions by these organs. This hormone presents several properties of adrenal extractives (Sajous, 1907). Another hormone described by Zuelzer and others has been found in ample quantities in the spleen. This splenic hormone specifically stimulates peristalsis to a remarkable degree. Hormone, available as harmonal, has been found of considerable value, according to Sajous, in chronic constipation by intravenous injection. These injections produce little local reaction, cause slight rise in temperature, sometimes serious depression and collapse.

Pituitrin stimulates the vagus and is of value in stasis due to intestinal paresis. Anterior lobe pituitary has seemingly been of value in spastic types. Adrenalin stimulates sympathetic, and antagonizes vagus. Per os it stimulates nerve endings in the stomach, the action continues throughout the intestines and bile ducts, inhibits peristalsis and does not act on sphincters, as pylorus, iliocecal and anus, save by increased contraction. There is no systemic effect from adrenalin per os.

Constipation is a symptom of hypoadrenia while diarrhea is a symptom of hyperadrenia. Adrenalin is of undoubted benefit in the spastic type of constipation, the so-called vagotonic individual.

In summing up the drugs in the treatment of intestinal stasis we have none that are specific or reliable. Purgatives and active cathartics should be avoided. The increased amount of bulk produced by increased intake of liquids or prevention of absorption with nonabsorbable oil, the mild laxatives, as cascara, are simply aids in giving relief. To secure a permanent cure the actual causes of stasis must be ascertained and treated accordingly.

Frisco Building.

#### INTESTINAL STASIS—SURGERY\*

F. REDER, M.D.  
ST. LOUIS

We have so far listened to a splendid exposition by the various essayists on the different phases of this interesting and complex subject. When I say that only about one-tenth of all the cases of intestinal stasis become surgical, I

\* Address delivered at the meeting of the St. Louis Medical Society, November 11, 1916.



may perhaps assuage the acute feelings of the previous speaker. Right here I may be permitted to quote the words of Dr. Robert T. Morris, who said: "Surgery is a brutal way of overcoming what the internist overlooks."

Before we dwell upon the surgery of intestinal stasis let us again define to ourselves what really this condition implies. Chronic intestinal stasis is a condition of chronic obstruction with an accumulation of the excrementitious matter in the intestinal canal resulting through its stagnation in an over-production of toxic material, the absorption of which leads to a chronic poisoning of the entire organism. You will please notice that the expression "chronic" figures very prominently in this particular condition. Formerly such a condition was known as chronic intestinal toxemia, a chronic intestinal autointoxication.

It must be remembered, however, that chronic intestinal stasis and chronic intestinal toxemia are much the same. The ratio between the intestinal stasis and the individual's defensive power determines the degree of toxemia.

It is only in recent years that surgery has begun to enact such an important part in the treatment of this condition. For this the profession is indebted to Mr. Lane, an English surgeon of great prominence, who demonstrated in a convincing manner that intestinal stasis was largely due to mechanical causes, and that such mechanical causes when correctly interpreted could frequently be removed or corrected by appropriate surgical measures. These mechanical causes, as I wish to demonstrate to you by pictures on the screen, are various adventitious bands, folds and membranes, the etiology of which may rest with the evolutionary, the congenital or the inflammatory theories. The inference that I can deduct from these theories as I have studied them is that all three are, to a certain degree, responsible for the presence of these bands. In any event, these bands have become so pronounced a factor in the abdominal anatomy that they have been designated by the name of their discoverer, just as other anatomical structures have been named after their discoverer, for instance, the fallopian tube discovered by Fallopius, the eustachian tube discovered by Eustachius, the Stenson duct, discovered by Stenson, and so on.

Let us consider a few of these folds and membranes and when we reach the pictures I will demonstrate them to you. There is the fold of Treves—a bloodless fold of peritoneum that passes from the mesenteric border of the cecum—the non-mesenteric border of the terminal ileum to the posterior and lateral abdominal wall.

There is the fold of Jonnesco and Juvara, a fetal membrane arising from the peritoneum at

the left or inner side of the ascending colon, passing over the ascending colon in an inward and slanting direction, like an open fan, and attaching itself to the parietal peritoneum at the right and outer side of the colon.

Closely allied to this membrane, but possessing individual characteristics, is Jackson's membrane, a peritoneal fold having numerous parallel, unbranching blood vessels with strong strands of connective tissue running between the vessels. This membrane reaches from the hepatic flexure of the colon to three inches above the caput coli. It spreads from the visceral peritoneum on the outer side of the ascending colon to the internal longitudinal muscle band of the colon. This membrane does not envelop the caput coli nor the appendix. You will notice that the parietocolic fold of Jonnesco and Juvara does.

Then there is the genito-mesenteric fold of Reid, which passes from the mesentery segment of the ileum down into the pelvis, being attached in the fetus to the genital gland below.

These are a few of the folds that have centered suspicion and attention on themselves on account of their prominence as causative factors in intestinal stasis.

However, other suspensory folds of the gastrointestinal tract, regarded as normal structures, may through abnormal influences crystallize into "lines of force" and cause an abnormal fixation of any part of the intestinal canal and be productive of an intestinal stasis. This may well be summed up as a physiological response to a mechanical demand.

In the surgery for intestinal stasis these are the conditions that must be recognized and I assure you their recognition is often attended with some difficulty.

It is not difficult to recognize the more prominent conditions, such as a ptotic bowel, but then a displaced bowel does not always mean that such an individual is a subject for surgery.

In operating for intestinal stasis the procedure differs from the usual abdominal work in that the character of the operation is to be determined not before operation but after the abdomen has been opened and thoroughly explored. The cases that are usually considered surgically are those where a demonstrated relation between the intestinal condition and the constitutional state is seriously taken into account, in which hygienic, dietetic, gymnastic and medical treatment have failed to give relief or have failed to arrest the progress of invalidism.

There are three requisites essential to a successful operation for intestinal stasis, namely: When to operate, what to operate, and how to operate. If these requisites can be successfully met in a given case, such a patient's interest will be served as well as can be done surgically. It

requires a well balanced, conscientious surgeon who knows his technic to be a successful abdominal surgeon.

The paramount idea in instituting any surgical measure for intestinal stasis is to restore or re-establish as far as possible the physiologic drainage of the intestine. In carrying out this idea the operation must be one that will secure easy and complete emptying of the bowel; it must relieve the back pressure and reflux into the ileum, it must efficiently correct or remove the anatomic abnormality which is causing the obstruction and it must avoid any unnecessary mutilation that will destroy the future functional usefulness of the bowel.

The carrying out of such measures may not always be possible for the reason that existing pathological conditions may be of such a nature as to preclude an operative success and it is here where even the experienced surgeon will find his resources taxed to the utmost.

A few examples of a pathological change that defy restoration are a cecum that has become dilated, flabby and hypermobile, the cecum mobile of Wilms, by distension due to retardative angulation at the hepatic flexure; a transverse colon that has become atonic and atrophic by prolonged purgation, a mucous membrane that has become the seat of an interstitial or follicular infection; and a marked redundancy of any portion of the colon or sigmoid.

In considering any operative measure upon the bowel tract we must have in mind that we are dealing with a problem in physiology and not merely one of gravity and plumbing. Furthermore, one must not lose sight of the fact that all raw and denuded surfaces, surfaces divested of their peritoneal protection, must, after the operative attack has been made, be fully peritonealized, otherwise the operation in most instances will prove a failure. Such procedures call for a refined technic that can only be acquired through much practice.

In the surgery for intestinal stasis radical and conservative measures are spoken of. The radical measure includes such procedures as excision of the cecum, resection of the transverse colon, resection of the sigmoid, colectomy and the various short circuiting operations.

The conservative measures embody such procedures as plication of the meso-colon, fixation of the sigmoid, gastropexy and omentopexy.

Experience has been a great simplifying agent in the surgical treatment of intestinal stasis.

Perhaps the most grateful operation is not a complete colectomy but a partial colectomy, removal of the cecum, ascending colon and the hepatic flexure, without crowding the omental attachment too much. The removal of this part of the intestinal tract has been favored because it was found to readily assume the char-

acteristics of a cloaca, a breeding place for microorganisms that rapidly assume a virulent nature. It was found that after its removal many patients recovered their health.

The operation of ileosigmoidostomy and other short circuiting operations have proven disappointing in many instances and are meeting with less favor. Colon stasis and infection are not always relieved by such an operation and ileum stasis and regurgitation are apt to be increased. There are, however, certain cases that are greatly benefited by a short circuiting procedure, especially where the cause of the trouble can not be removed, being of a neoplastic nature either malignant or benign.

A cecosigmoidostomy is an ideal operation if the procedure can be carried out. The opportunities for such operations, however, are rare. A cecosigmoidostomy would give an ideal drainage and prevent the accumulation of excrementitious matter in the cecum and ascending colon.

The operation for the partial implantation of the colon as performed by Dr. Reed of Cincinnati presents some logical features. The object of the operation is to restore as nearly as possible to their normal position the ptotic colon and to relieve the angulation of the hepatic flexure.

In obstruction caused by bands and membranes the simple division of these strictures may effect a cure. Especial attention must be paid to fibrous bands. The bands or membranes must be fully divided to such an extent as is necessary to completely correct any angulation, constriction or obstruction. In some of these cases the defect in the membrane thus produced may be corrected by uniting the margins of the opening in the membrane at right angles to the line of division, a technic similar to the Mikulicz-Heineke pyloroplasty.

The removal of a chronically diseased appendix will frequently relieve an intestinal stasis. Such a return of normal bowel function, however, must not be attributed directly to the diseased appendix but to the drainage consequent to the lesion of the organ. In the removal of the appendix the abnormal conditions, usually consisting of adventitious bands, adhesions and appendiceal ties, the potential factors of the kinking and angulation of the terminal ileum and in reality the cause of the stasis are destroyed, thus freeing the affected bowel. The manner of how restoration was accomplished is not appreciated by many operators, and they are content to know that with the mere removal of the appendix the bowel function was again restored to its normal activity. The fact is, that with the digging out of the adherent appendix to make its removal possible the barriers responsible for the stasis are being broken down.

706 North Kingshighway.



# THE PROCTO-SIGMOIDOSCOPE IN THE DIAGNOSIS AND TREATMENT OF INTESTINAL STASIS\*

H. W. SOPER, M.D.  
ST. LOUIS

After considerable experience in the treatment of chronic constipation by various methods, I have come to the conclusion that over 50 per cent. of all cases are due to disturbances in the lower colon, extending from the anal canal to the splenic flexure.

The procto-sigmoidoscope has greatly facilitated the diagnosis as well as the treatment of diseases of the lower colon. This instrument, which should be in the possession of every physician, has been left almost entirely to the specialist in rectal diseases. It is only in recent years that a few internists and general surgeons have availed themselves of it. Many diagnosticians rely upon radiography of this region. While it is true that gross malpositions and large growths may be demonstrated by the Roentgen ray, diseases of the mucosa, smaller growths and contractures can only be revealed by careful sigmoidoscopic examination.

The muscular contractures or spasms of the rectum and sigmoid are quite frequent. Normally the ampulla recti presents itself as a wide, smooth sac with projecting valves. Spastic contraction of the rectum occurs as a result of ulcers and fissures of the anal canal. It is also observed in diarrheas as well as in neurotic patients with no demonstrable lesion. It is curiously absent in inflammatory processes and ulcerations limited to the mucosa of the ampulla, probably because of an absence of sensory nerve fibres in this region.

The first three inches of the sigmoid flexure is often seen to be in a condition of strong tonic spasm. Normally, there is a tendency for this portion of the colon to be in a state of mild contraction, but the folds readily separate and allow the tube to enter. In chronic spasticity the tube will not enter. Oiled cotton applicators may be with difficulty introduced. Small hard masses of fecal matter are often seen in the folds. The mucosa often shows evidences of mild inflammatory processes. Efforts to pass tubes even of small calibre cause pain.

The clinical picture of severe cases presents a definite syndrome. The obstinate constipation, the characteristic fragmentary feces, the increasing inefficacy of purgatives, the pain and scanty fecal discharges produced by enemata of water, are symptoms commonly recorded in the case histories. Furthermore many patients complain of dull aching pain in the left hypochondriac region. In addition to these symp-

toms the sigmoidoscopic picture as above described confirms the opinion that a spastic contracture of the terminal sigmoid flexure is a clinical entity and is quite analogous to the condition known as cardiospasm. The term "sigmoidospasm" would not be inappropriate. Moreover the treatment corresponds to the results obtained by direct dilatation of the cardiospasm. Sigmoidospasm responds gradually to local applications of oil and the passage of tubes of increasingly larger calibre. The regular use of oil enemata is always indicated. Water enemata and purgatives are always contraindicated.

Contractures and deformities of the bowel at the junction of the rectum and sigmoid are frequently produced by inflammatory processes that involve the wall of the bowel. Many cases of perisigmoiditis are associated with muscular spasm. However, the differential diagnosis from sigmoidospasm is not difficult. The thick, adherent wall of the bowel is immovable and fails to respond to efforts at dilatation. Severe cases of perisigmoiditis closely simulate malignancy and prolonged observation is often required to differentiate.

Atonic conditions are easily recognized. There is no tendency to contracture, the sigmoid canal is widely open and often cannot be differentiated from the ampulla recti. The rectal valves are often absent.

Inflammatory conditions of the rectal and sigmoidal mucosa often lead to a form of unrecognized constipation. The patient usually comes with a history of diarrhea, but investigation will show that while the actions are frequent, they are entirely inadequate. Direct local treatment by the dry powder method of Rosenberg gives brilliant results in these cases.

No general examination of a patient is complete without sigmoidoscopy. The sigmoid flexure is really more accessible than the trachea or esophagus and offers better opportunities for diagnosis, prophylaxis and treatment.

Wall Building.

## TREATMENT OF INTESTINAL STASIS BY MEANS OF PHYSICAL THERAPY\*

F. W. EWERHARDT, M.D.  
ST. LOUIS

To the more common non-surgical methods of treatment of intestinal stasis, physical therapy may add various means which have proved efficacious in the hands of competent operators. It is the aim of this paper to bring before this body some of these procedures.

\* Read at the meeting of the St. Louis Medical Society, Nov. 11, 1916.

\* Read at the meeting of the St. Louis Medical Society, Nov. 11, 1916.

We find in Howell's<sup>1</sup> physiology that the physical act of defecation is primarily one of contraction of the lower bowel, augmented by interabdominal pressure induced chiefly by the compressing effect of the enclosing musculature, the abdominal walls, the diaphragm, and the pelvic floor.<sup>2</sup> Normal peristalsis is the result of active contraction of the circular and longitudinal muscle fibres found in the intestinal walls. A weakening of any of these forces will tend to cause sluggish peristalsis and constipation of various degrees.

Ochsner<sup>3</sup> tells us that the general downward displacement of the intra-abdominal organs, especially the transverse colon, is frequently found in patients suffering from intestinal stasis, and that in these cases the circular muscles have been greatly weakened. It is not unlikely that the condition of intestinal muscular atony is a concomitant cause of a disorder of the neuro-muscular mechanism of the great bowel, which latter condition Keith<sup>4</sup> believes to be present in all cases of intestinal stasis. Goldthwait<sup>5</sup> and Martin<sup>6</sup> share the belief of the close association of intestinal stasis and enteroptosis with abdominal muscular insufficiency. Bodily inactivity, old age, frequent pregnancies, obesity, constant straining, faulty posture, improper corsets and dresses, are the most common causes of weakened abdominal and pelvic muscular strength. Since the condition is so definitely a mechanical one it is primarily in these cases that physical therapy finds a fruitful field for action.

Each case must of course be treated individually and according to conditions indicated, but the essentials in the treatment must point towards: (1) strengthening of the abdominal wall and pelvic floor; (2) removal of intestinal atony; (3) increase of intestinal secretion; (4) improving the integrity of the nervous system; (5) correction of posture, supports, dress and habits; (6) emptying of cecum and rectum daily.

The methods which physical therapeutics employs to attain these ends are: exercise, massage, mechanical, hydrotherapy and electricity. One or more of these agencies are used, depending on circumstances. The results obtained are in direct proportion to the degree of correctness employed in prescribing and in technic. It is, therefore, not fair to expect the same physiological results to follow the performance of an exercise which may be performed in various ways. Too often when massage or hydrotherapy are ordered by the physi-

cian the directions to the patient are too general and vague and the application and supervision left to the patient entirely. In such cases results must be unsatisfactory. Lovett<sup>7</sup> sustains this contention in his article reporting the results obtained in a series of a large number of poliomyelitis cases. In a given number of patients exercise and massage were ordered supervised by mothers, in others by expert operators. The beneficial results were as six to one in favor of the expert operators.

The general muscular weakness and liability to fatigue from which so many intestinal stasis patients suffer (Mutch)<sup>8</sup> together with an utter lack of muscular sense (the ability to fully appreciate balance, direction, position, flexion, extension, etc.), makes it extremely unlikely that any treatment involving bodily effort, concentration, precision and skill, will prove very satisfactory unless properly directed and supervised.

General exercise is employed because of its beneficial effect on general metabolism. It improves intestinal circulation by relieving splanchnic congestion and by aiding digestive processes. It stimulates skin and kidney activity thus relieving the body of toxins which play such an important part in the etiology of intestinal stasis.<sup>8</sup> It increases respiration, thus assisting the return circulation and by deepened diaphragmatic excursions cause alternate compression and relaxation of the intestines, which acts as a mechanical stimulus.<sup>9</sup> It promotes regularity of bowel movement.<sup>10</sup> Bodily laziness will almost always beget constipation.<sup>11</sup> General exercise tends towards improving faulty posture. The particular type of exercise for this general purpose is of no great consequence. Any of the common sports, games or gymnastics with which we are all familiar will do, provided they are compatible with the strength of the patient.

For the strengthening of the abdominal walls and pelvic floor a greater degree of discretion and skill must be used in selecting the type of exercise, the proper dosage and execution. Herewith is appended a list of such exercises.

Massage improves the tone of the abdominal muscles, increases their strength and prevents wasting. It feeds the muscles without exhausting them. It is a superior measure to be used particularly in cases where exercise is contraindicated, like piles, fistula and other pelvic diseases. The whole intestinal tract is brought into a heightened state of activity through stimulation of the neuro and vasco-motor sys-

1. Howell's Text Book of Physiology.

2. Paramore: *Lancet*, December, 1911.

3. Ochsner: *Surg., Gyn. and Obst.*, January, 1916.

4. Keith: *British Jour. Surg.*, 1914-15, p. 576.

5. Goldthwait: *Pa. Med. Jour.*, April, 1914.

6. Martin: *Surg., Gyn. and Obst.*, 1912.

7. Lovett: *Jour. Amer. Med. Assn.*, August, 1916.

8. Mutch: *British Jour. of Surgery*, 1914-15, p. 608.

9. Brunton.

10. Nothnagel: *System of Medicine*.

11. Ward: *N. Y. Med. Jour.*, June, 1912, p. 1309.



tems.<sup>1</sup> The removal of waste and the acceleration of lymph and blood circulation create a natural demand for an increase in nutriment. The secretion of the intestinal glands is promoted together with the absorption of the products of digestion. Massage directly excites the reflexes by which the alimentary mass is removed through the intestines.<sup>12, 13</sup> The value of massage is recognized by such men as Osler, Nothnagel, Brunton, Wei r Mitchell, Solis Cohen, McKenzie, Kellogg and many others in America and Europe. Scientific massage must not be confused with so-called rubbing. Its proper technic requires a thorough knowledge of anatomy and physiology. Time and space however forbids entering into closer details regarding that phase of it. Aside from the general abdominal massage, special attention should be given to the region of the cecum and the pelvic colon, the two selective seats of stagnation in the large bowel (apart from kinks and adhesions).<sup>14</sup> Kellogg<sup>15</sup> claims that in a large proportion of cases the pelvic colon is displaced backward into the pelvis. By filling the colon with about three pints of normal saline solution at 102 F. and with the patient in the knee-chest position, gravity is made to assist in getting the colon back into its normal place. Massage is applied in this position. He also lays great stress on the necessity for Roentgen-ray examination as an aid to massage.

Hydrotherapy like exercise is employed generally for its systemic and specifically for abdominal action. In the first case we employ the electric light cabinet bath for its eliminative effect followed by the various douches to obtain a tonic reaction. Nothing seems to equal this treatment in its power to tone up the whole body, and no treatment is more enjoyable to the patient. More specifically the following hydriatic procedures are indicated and used in the various hydrotherapy departments which today form a necessary part of all modern hospitals.

*Irrigation.*—Either the simple enema may be employed, using three to four pints of saline solution at 80 to 90 degrees, or the graduated enema for the purpose of breaking the habit, starting with the simple enema and gradually reducing quantity and lowering temperature daily. When using a warm enema always follow with cold for its tonic effect.

*Wet Girdle.*—This consists of a linen bandage 10 to 12 inches in width and three to four yards long; one-third to one-half of this length is wrung out of water at 50 degrees to 60 degrees F., applied to the abdomen and the

dry part wrapped around the wet and pinned. A dry flannel three to four inches wider may be used to cover the wet bandage. This procedure is helpful for combating visceral congestion and relieving headache and abdominal pain. It stimulates intestinal gland activity.

*Sitz Bath.*—Water 50 to 70 degrees from two to five minutes. Place feet in hot water and apply friction. It excites contraction of the muscular structures of the viscera and the whole nervous system. Contra-indicated in all abdominal or pelvic inflammatory conditions.

Jet or fan douche to the abdomen for its tonic and reflex effect. One may alternate hot and cold.

Cold foot bath or plantar douche. Reflex action stimulates abdominal and pelvic muscular structures. Stimulation of circulation of the lower extremities, a reaction highly desirable since cold feet is a condition existing in so many of these patients.<sup>16</sup>

These are some of the more common measures employed in hydrotherapeutics which in some instances can be carried out at home with good results.

*Mechanical Means.*—Various kinds of mechanical apparatus have been placed on the market in recent years to aid the physical therapist in his work; some are good and many are worthless. One of these is a couch so constructed that revolving arms are caused to press alternately on the abdomen of the patient who is lying prone on the couch. The machine has proved itself a valuable aid in mechanically stimulating the abdominal viscera.

Vibratory movements as a therapeutic agent was first brought before the profession by Granville<sup>15</sup> of London in 1878, and later by Charcot of Paris, and Zabludowski of Berlin. Kellogg popularized it in America. Among others Groedel<sup>15</sup> of Germany has made extensive experiments on the effect of vibratory massage on the large intestine, making observations by the aid of the Roentgen-ray and bismuth injection. He finds that the constant effect of vibration is to produce a slow but continuous forward movement of the intestinal contents.

Electricity in various form is practised in the treatment of intestinal stasis, and when in expert hands at times with good results. It is however not yet a popular measure. The currents chiefly employed are the static wave, galvanic, faradic and the sinusoidal. The latter is more recent and possess the property of being able to produce painless contraction of both voluntary and involuntary muscles. During recent years an electrical apparatus invented by

12. Bayliss and Starling: Jour. of Phys., 1900, p. 107.

13. Fisher and Fisk: How to Live.

14. Barclay: British Jour. of Surg., 1914-15, p. 623.

15. Kellogg: Colon Hygiene.

16. Mutch: British Jour. of Surg., 1914-15, p. 625.

and named after the French physician Bergonie, has become popular in institutional work. There are now several modifications of this; the best one apparently is that operated by the sinusoidal current. The apparatus consists of a reclining chair so constructed that the current may be applied to any group of muscles with a dosage entirely under control. It is referred to as an automatic exercises and adapts itself well in cases of lax abdominal walls in connection with obesity, diabetes and great muscular weakness.

*Correct Shoes.*—In many of these patients, particularly those following frequent pregnancies, and it matters little whether the abdominal walls are pendulous or flat, a well supporting corset and a correct pair of shoes are essential adjuncts to daily exercise in restoring bodily balance. Reynolds and Lovett<sup>17</sup> in their work on chronic backache, and Dickinson and Truslow<sup>18</sup> in their article on Attitude in Woman and Its Relation to Pain, have most forcibly brought to our attention the very close connection existing between deranged abdominal viscera and pain, *with* correct body balance. In the Washington University Dispensary we have many cases of conditions just noted. These are referred to the Hyro and Physical Therapeutic Department. To the regular routine treatment of exercise, massage and stimulating baths, the patients are instructed with respect to shoes and corset.

I have attempted to bring before you some physical methods which might prove helpful additions to the more common forms of treatment. I wish to add that these methods are applicable only to non-surgical cases when the predominating pathological condition is a mechanical one. When these measures with a proper diet and oil treatment are carried out faithfully, the prognosis is good.

The following is a list of exercises for general body building, to correct faulty posture and strengthen lax abdomen muscles:

1. Patient lying on back with arms next to body. Bring knees as near to chest as possible, keeping arms against side of body. Hip raising while exhaling. Effect: To shorten the abdominal muscles.

2. Patient lying on back bring thigh to right angle to body with knees flexed. During exhalation patient tries to bring knees to chest against resistance.

3. Lying on back, bring right knee as near to left axilla without use of arms, as possible. Alternate, with exhalation.

4. Abdominal breathing. Standing erect, place hands on hips, thumbs back, and attempt to fill chest by "pushing" abdominal contents upward.

1. Heels, hips, shoulders, and head touching the wall. Hold position and gradually put top of head to wall, face turned to ceiling. Bring head forward and retain position of body thus obtained. Walk out, with weight well on balls of feet.

2. Hands clasped behind head. Push backward with hands against head, lift chest, and gradually rise on toes. On a final count (8) give a good steady pull forward with hands and back with elbows. Stretch all muscles to fullest extent.

3. Right hand on hip, raise left arm side-ward. Make complete circle with left arm. Same with right. Then both arms, sideward crossing the front of eyes; make complete circle, same crossing in front of waist line. Keep chest well lifted and abdomen and hips back.

4. Hands clasped on top head. Pull up with hands and rise on toes through six counts. Then relax and repeat four or five times.

5. Standing with back to wall, raise arms straight over head, take one step forward, allow body to sway backward until fingers touch wall. Raise heels and chest.

6. (a) Feet astride, arms straight over head. Fling arms downward between legs as far as possible, rise and stretch up to original position. Do this without bending knees. (b). Feet together, arms straight over head, bend trunk forward without bending knees and touch toes with hands.

7. Finger tips on shoulders, arms shoulder high. Pull backward as far as possible with arms, letting the chest rise. Push abdominal contents upward. Relax and then repeat.

8. Heels together, hands on hips. On toes rise, bend knees deeply, keeping the heels well off floor. Bend knees outward (not forward). Keep chest well lifted, head up.

600 South Kingshighway.

#### DISCUSSION

DR. W. H. STAUFFER: Dr. Soper has told us that 50 per cent. of those cases could be diagnosed per rectum, but with an experience of something over 2,500 cases I will say at least 80 per cent. of them can be so diagnosed. At least 50 per cent. of them can be relieved, and 40 per cent. cured. I have the statistics to know whereof I speak.

I think the symposium has demonstrated, if nothing else, the necessity of taking a broad view of any condition. The specialist who does work without a general experience sees everything through his own particular glasses. No one can make the diagnosis of intestinal stasis without first getting reports from every individual who is following some definite specialty as we find it in this symposium, and then coming to a definite conclusion and treating the case intelligently.

It is especially necessary that the case be treated as an individual and not as so much pathology. The average patient who comes to me has been treated

17. Reynolds and Lovett: Jour. A. M. A., March, 1910.

18. Dickinson and Truslow: Jour. A. M. A., December, 1912.



by four or five specialists in other lines, and in order to get a definite history it takes from a week to ten days to make an intelligent diagnosis. Right here is another point worth considering: Unless your patient promises to stay with you after you make your diagnosis, it is "Love's Labor Lost."

The few points that I would wish to emphasize with reference to treatment are, particularly, the habit of establishing a definite time to attend to toilet duties. The so-called "lost call" that is emphasized by Kellogg, has a great deal of good common sense in it. The condition was very forcibly brought to my mind not long ago by a young society lady. I insisted on that point and she said, "Well, doctor, I have the desire, but not the inclination." I said, "Define just what you mean by that." She said, "Every morning at a regular time I have the desire to go to the toilet, but I have the inclination to remain in bed." What happens in that case is worth considering. The bowel is not properly emptied of residual feces and a catarrhal condition, an intestinal stasis results.

There has been no definite line drawn tonight between constipation, obstipation, and fecal impaction. They are vastly different. The pathology is different, the treatment is different, and the diagnosis should be stated. Obstipation is due to a mechanical obstruction, either intrinsic or extrinsic, and unless we take care of the obstruction there is no use treating the rectum. A definite diagnosis in these cases must be established. A fecal impaction requires oil enemas, in order to empty the bowel thoroughly; then treat the catarrhal conditions. I have derived more benefit by treating the muco-colitis in those and have forty or fifty cases to report in the near future. By treating the mucous membrane higher up and thus removing the focus of infection we procure definite results. The use of the cold-water enema properly administered is beneficial but the use of large enemas as a routine measure for therapeutic purposes must certainly be condemned.

The various liquid preparations have their place, and that place is in the use of enemas. I do not think that permanent good has ever been accomplished, but a great deal of harm done, by administering them per mouth. Frequently, in administering oil by mouth, only the oil will be passed; it does not remove the feces in every case. On the other hand, properly administered by enema in the evening and allowing the oil to remain during the night a much better movement will be obtained.

As to drugs, the way to use drugs is to give as few as possible; but give a dose large enough, when you do give them, to produce not only an impelling but a compelling desire. It is better to begin with a large dose and work down than it is to work up from small doses.

DR. J. D. HAYWARD: There are two conditions which arise after an ileosigmoidostomy. One is the great thirst by the patient, and the other is the diarrheal condition which follows. Those two conditions are dependent on the absorptive power of the colon which has been removed. It has been proven by experiments on the lower animals that those two conditions will last until the ileum vicariously assumes the function of the colon. The diarrheal condition which follows is not due to the fact that the acid contents of the ileum have not been neutralized by the alkaline secretion of the intestine, but to the fact that the water has not been absorbed and the contents are more liquid until the absorptive function of the colon is assumed by the ileum.

Dr. Lyon of New Haven, Conn., had an ileostomy performed on himself because of colon obstruction, and observed that for the first six weeks following the operation he complained greatly of thirst and would drink from three to four pints of water at a

time, but after six weeks the ileum had vicariously assumed the absorptive power of the colon and the stools then became solid but remained odorless. In Lane's cases it was true, according to authoritative statements, that the bowel action was normal; solid contents were passed after the ileum vicariously assumed the functions of the colon.

DR. ROLLIN H. BARNES: One thing that has been brought to my attention by these papers is that we have overlooked the real origin of this condition known as intestinal stasis. It does not begin in adult life, it begins in childhood; it has its origin in the manner in which we live, the condition of the food we obtain, especially in cities; the inflammatory occurrences that take place in the bowel as we grow into manhood. As the patient grows older, we find these inflammatory conditions become more chronic; it is not the inflammatory conditions that we find in diarrheal conditions but a chronic inflammatory condition that affects different portions of the alimentary canal in different cases. In the treatment of these old, chronic cases we should take into consideration especially the history of the case; find out the methods of living, the diet, habits with reference to bowel movements, and not consider alone the end results, bands and angulations, displacements of the bowel, etc. These are the end results, not the causative factors of this condition; and only when you consider the condition as it originated and developed will you be able to treat successfully this end condition.

Many of these patients when they come to the physician are such that it is impossible to cure them. When we are unable to treat them successfully we turn to surgical treatment, and then we are apt to go to extremes—we try to change normal conditions radically and go too far. There is no question in my mind that Lane is largely right and has done considerable good in calling our attention to the causative factor in certain classes of constitutional diseases that are the result of toxic absorption from the alimentary canal. You will find that by treating these cases early, say at 20, you will be able to obtain better results than you can when forty is reached.

There is only one way to regulate the bowel movement and that is by the cold enema. I prefer the cold enema because you can produce an action at a definite time. If the water is sufficiently cold you stimulate peristalsis. The trouble is that the patient has been taught to use warm or lukewarm water and becomes frightened when directed to use cold water. The quantity of water introduced at one injection should be limited to one pint, and you will find that two or three ounces will be all that is often needed to move the bowels, if used sufficiently cold.

Liquid paraffin is not used according to Lane's idea. I have had patients come to my office wearing a pad because of the quantity of the oil that had been used. The object of the oil as intended was to prevent the absorption of toxin, not to act as a laxative. The way it acts is not certain. My idea is that it makes some kind of combination with these toxins and thus prevents their absorption. Impure paraffin is absorbed and does not prevent the absorption of the toxin. It should not be looked on as a laxative or lubricant but as an agent that will prevent absorption.

The diet is important in this condition. There have been recent investigations that have changed our ideas as to what is proper food. I believe that mostly we are agreed that the diet should be a mixed one. It has generally been believed that the protein diet was the most harmful. I have taken the stand for some time that it is the excesses that do the damage. In my paper before the American Proctologic Society this summer, I advocated that excessive carbohydrate

diet most frequently is to blame for producing ulceration of the lower bowel—fissure. We find that skatol and indol, products of protied diet, are slow to be eliminated but are not particularly harmful to tissue. I have observed that patients suffering from toxemia are mostly in the habit of using an excessive carbohydrate diet. In the treatment of inflammatory conditions of the lower bowel, one of our most successful men in this country, Tuttle, long ago made it a rule to put these patients on a protied diet. He was unable to explain why he obtained results. Howell's physiology states that ulcers can be produced from excessive carbohydrate diet and excessive fat diet. We should not go to the extreme and give a vegetable diet in all these cases. If we deem it advisable to use an increase of cellulose, increasing the refuse in the bowel, that may be well enough at times, but it should be done with considerable caution and not as a routine. We should start with a mixed diet, probably smaller in amount than is necessary for nourishment, and gradually, as we study the case, increase to suit conditions. The time for fixed rules for diet is passed; in fact, we are not able to examine the patient today with sufficient exactness that we may be able to write out a diet list that would be suitable for the case.

DR. LOUIS H. BEHRENS: It was my privilege a few years ago while in England, to hear a very interesting program or talk as they call it, on intestinal stasis, in which men of the type of Moynihan and Sir Arbuthnot Lane took part. I may say that the program of the last two evenings here has been more edifying in every way than what I heard there. That resolved itself into a certain confusion regarding Lane's theory of operative procedure. It was my privilege to see Mr. Lane operate—a most dexterous operator, perhaps no one could do the Lane operation of the entire removal of the large intestine and the ileum or a portion of it, as Mr. Lane could do it. As an internist, practicing along that line, I was somewhat horrified to see the colon removed for goiter; no intestinal stasis at all, but he considered the entire field of general infection of a chronic type—acute articular rheumatism, goiter, either the hyperthyroidism or the hypo—due to intestinal stasis or the cesspool condition as a causative factor. After this talk, there were something like thirteen or fourteen patients exhibited to us who had various diseases for which the large intestine had been removed. Tonight there has been mention, or rather question, regarding the anastomosis of the ileum to the sigmoid causing a diarrheal condition. That question was brought up then, and Mr. Lane said, "Ask the patients here what condition exists." In every instance there seemed to be a normal colonic storage, as it were. As you all know, Lane's idea is, as Dr. Pohlmann has stated, that these bands, kinks, etc., have come about in the process of evolution, in the change of posture, as necessary to sustain the intestines and to keep them from a crowded condition.

Mr. Moynihan stated that he was sorry that he could not report more work along intestinal stasis in Leeds in such conditions as Mr. Lane had found in London, but that in Leeds he had found very little operable intestinal stasis. He went on to say wittily, that as diarrhea was one of the symptoms, he had noticed in crossing through various cow pastures conditions that would lead him to think the animal population of Leeds was affected with stasis symptoms, though not the human so much. Mr. Lane answered very appropriately that as this was a disease of civilization he thought that in all probability the people of Leeds, England, would soon come to that stage of civilization where perhaps the operation would become a necessity. That wound up the symposium,

and you see how seriously the subject was thought about.

We have rather felt from the papers of the last two meetings that perhaps Dr. Pohlmann fathered in part a solution in accordance with the work of Dr. Bain as being able to tell what a man's characteristics were by the shape of his ears.

It is strange how often we will have a Roentgen-ray picture taken of a case of this kind and feel that we can make up our mind that we have a definite stasis condition and the next picture taken of the case, say in forty-eight hours after the meal, will show the colon in entirely different attitude and looking fairly normal, the pictures taken at 120 hours or sixty hours afterward showing still another shape. I recall such an instance a few years ago, that I thought would have to have a Lane's operation, but suggestive therapy has resulted in her still keeping her colon and she is very materially relieved.

It has been my experience that drastic catharsis does no good whatsoever. The whole problem resolves itself into a sane treatment of these cases, carrying out the ideas of these papers.

DR. REDER, closing: This very jar that Dr. Pohlmann has spoken of is considered now to be one of the important factors in bringing about the relief of the stasis; that is, considered so by the neurologists. However, I do not know with how much conviction that may be taken. The understanding is that a certain shock to the nervous system is one of the factors.

As far as the radiographic studies are concerned, radiography has made wonderful progress and is of the greatest assistance in the diagnosis of such conditions. However, such cases as I would study them would be to give procedure to (1) the history of the patient; (2) the findings in the clinical examination, and (3) I would consider as a corroborative measure the Roentgen-ray findings. If they confirm the diagnosis, then they are to be accepted; if they do not, then we are not going to take the Roentgen-ray findings seriously.

It is a historical fact, which I think will be of interest to the internist, that a certain French admiral, I think by the name of Branconier, had two or three actions of his bowels in a year. Whenever an action was to take place he had to ask for a leave of absence. This admiral lived up to the age of about 62 years. Undoubtedly, this must have been a case of Hirschsprung's disease.

DR. POHLMANN, closing: If I may take a moment, I would like to differ slightly with Dr. Reder's point of view regarding these adhesions and bands. If you are going to regard adhesions and bands as the product of adaptation—for example, the change to an upright posture—a mechanical thing, it is one thing. If you are going to regard them as pathological conditions, it is another thing. If they are normal adaptations you would not look for hypertrophied bowels, etc.; if they are pathological conditions you would expect such a thing. I fail to see where the people who have contended for obstruction by means of bands have made their point. Again, I notice that in spite of the fact that these adhesions of the ileum to the cecum are released by the surgeons, in the operations where they do ileocolostomy they apparently repeat the very thing which they cut out in the region of the appendix—that is, they do a lateral anastomosis of the ileum on the transverse colon. It is merely my private opinion—I have no experience at all—but I rather feel that in a great many instances there must be a very violent jar to the patient's system, which is in part responsible for the results that may be obtained, and I think it is more or less in keeping with Dr. Engelbach's general statement.



# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

MAY, 1917

### EDITORIALS

#### NEED FOR MEDICAL OFFICERS OF THE ARMY

The need for medical officers of the army is acute and the U. S. Government is putting forth every effort to mobilize the physicians. In this work the state and county medical societies must give intelligent, whole-hearted assistance, for in no other way can the full quota of army surgeons be rapidly established. Missouri now has 109 members of the Medical Officers' Reserve Corps but this number must be increased to about 700.

Under a new ruling of the Surgeon General of the Army, physicians may apply for membership in the Medical Officers' Reserve Corps, take the physical examination, and receive their commission without delay.

At our annual meeting in Springfield, May 14, 15 and 16, members of the Reserve Corps will be on hand to enlist all who are willing to enter this service. Those who wish to make application before the date of our meeting may receive application blanks and instructions where to apply for examination by addressing the St. Louis Examining Board, M. O. R. C., 314 Metropolitan Bldg., St. Louis.

#### SIXTIETH ANNUAL SESSION

The gathering of the members in annual session this year will mark the sixtieth anniversary of our Association. None of those who attended the initial meeting in St. Louis in 1850 where the Association was created will be present to tell us how the physician of that day worked in the dim and shadowy light of empiricism and dogma, though groping hopefully for the knowledge that has since become so universal concerning the cause, the cure and the prevention of disease. There are a few of our members, however, who have passed the half century mark in the practice of medicine and several of them will be at the session in Springfield.

Unlike the individual who grows frail and infirm with the passage of many years, our Association annually renews its youth and assumes

greater burden and new duties with the eager spirit of conscious strength and power. Our sixtieth anniversary finds us more numerous in membership than in former years, more powerful in directing the minds of men toward better living, more thoughtful and considerate of one another, and more scientific than at any time in the past in our conception of disease and the necessary measures to prevent and eradicate it. Our annual programs give evidence of the progress we make from year to year and we believe the array of papers for the Springfield session will compare favorably with the programs of other years.

Springfield has entertained the Association only twice during our long period of activity; the first time in 1898 and again in 1908; but on both occasions she proved a charming hostess, in fact, so attractive that the number of members attending the 1908 session was larger than the number at any previous session. The members living in Springfield are preparing every means for the comfort and pleasure of those who attend and we expect the interest that is so generally expressed throughout the state will bring the largest number yet registered at any session.

We will repeat here the general information published in the April number regarding the meeting places, hotels, etc., in order that all may be informed: The general sessions will be held in the Landers Theater, the House of Delegates will meet in the Colonial Hotel, the Council will meet in the Physicians' Club Rooms in the Woodruff Building, and the Secretaries' Association will hold its session in the Physicians' Club rooms at an hour not in conflict with the Council meeting. The exhibits will be placed in the lobby of the Colonial Hotel, which will be headquarters.

The program is published in another column in this issue and is as nearly complete as time would permit before going to press. It is likely that there may be some changes in the final edition.

Health Sunday will be observed as usual and lectures by our members will be delivered in the churches on Sunday, May 13. The program for this occasion is published in connection with the scientific program.

#### HOTELS AND RATES (ALL EUROPEAN PLAN)

Colonial Hotel: Rooms without bath; \$1.00 to \$1.50 for one person. Each additional person, \$1.00. Rooms with bath, \$2.00 to \$3.00 for one person. A reasonable charge will be made for each additional person.

Sansone Hotel: Rooms \$1.00 per day and up

Marquette Hotel: Rooms (all with private bath) \$1.00 per day and up.

Rooms are available at the Y. M. C. A., Jefferson Hotel and the Keystone Hotel at 50 cents per day and up.

The committee of arrangements at Springfield will have a list of rooms in private homes for the use of members who do not wish to go to hotels. Springfield is well equipped to care for all members who attend the meeting, but we suggest that advance reservations be made at the hotels or through the committee of arrangements, so that accommodations may be ready on arrival. Address Dr. S. A. Johnson, Chairman of the Committee on Arrangements, 801 N. Jefferson St., Springfield, Mo.

### COMPLEMENT FIXATION IN THE DIAGNOSIS OF TUBER- CULOSIS

The attempt to use the method of complement fixation in the diagnosis of pulmonary tuberculosis is by no means new, but recent studies along this line offer the hope that a serologic test comparable in value with the Wassermann reaction is not a remote possibility. The great obstacle in the development of the test has been the preparation of a satisfactory antigen. Besredka, in 1914, was the first to overcome this problem in any measure by the use of a filtrate of tubercle bacilli grown upon a special egg-meat-broth medium. Cross fixation with other conditions greatly interfered with the reliability of this antigen. Last year Miller,<sup>1</sup> of Columbia University, reported more satisfactory results with the use of an antigen prepared by extracting tubercle bacilli with sodium chlorid. With this antigen Miller obtained positive results in 275 of 284 cases of "active" pulmonary tuberculosis and negative reactions in 144 non-tuberculous cases. Of 113 "clinically arrested" cases, 103 reacted negatively. He experienced no difficulty with cross fixation with syphilitic sera. Craig,<sup>2</sup> of the Army, has been experimenting with the reaction for several years and in a recent article urges the desirability of a polyvalent antigen prepared from several strains of the tubercle bacillus and obtained positive reactions in 144 of 149 "active" cases of tuberculosis and in 39 of 60 "inactive" cases. Moderately advanced cases of active pulmonary tuberculosis gave the highest percentage of positive reactions. Craig believes that a positive reaction indicates an active tuberculosis process and that as long as a positive reaction persists a tuberculosis patient cannot be regarded as cured. In

the first number of the new *American Review of Tuberculosis*, Petroff<sup>3</sup> of the Trudeau Laboratory at Saranac Lake contributes his investigations which have extended over a period of several years and in which sera from over 700 individuals were studied. Petroff has tried numerous antigens and considers the use of several different antigens in performing the test more important than an antigen from polyvalent strains of the bacillus. He has come to use three antigens routinely, one a potato filtrate, another a sodium hydrate extract, and the third a methyl alcohol extract. A positive reaction may be obtained with either one of the first two and not with the other, but in Petroff's opinion a positive reaction with either means active tuberculosis. He considers it essential to repeat the test at intervals as activity in the tuberculous focus may not be constant and hence a single test misleading. The third antigen Petroff believes from his animal experimentation will give some prognostic information. He has obtained 199 positive reactions in 212 "active" cases of tuberculosis and in 89 out of 158 "quiescent" cases. He believes a positive reaction indicates active tuberculosis and a negative reaction an inactive lesion.

While these results are extremely important and promising we must recognize that at the present time the interpretation of the results is by no means sure, and hence the test is not practical for private practice, nor is it to be relied upon in diagnosis. We stress this point of caution because the test is already being advertised by commercial laboratories and we do not wish to see a promising diagnostic reaction die of a premature birth. The value of any serologic test depends in great part upon the definiteness of its interpretation, and, as is obvious from the multiplicity of antigens in use, the reaction must undergo considerably more laboratory and clinical investigation before it can be added to the armamentarium of the practicing physician.

B. S. V.

### PREPARING THE MEDICAL PROFES- SION FOR NATIONAL DEFENSE

Throughout the country there is a concerted movement to organize the medical resources of every community in order to place in the records of the government at Washington complete information of the facilities that may be commanded at any time in this branch of national protection. The Council of National Defense and the Advisory Commission of seven members appointed by the President, have been created by the Congress.

The Council of National Defense consists of the Secretaries of War, of the Navy, of the

1. Miller, H. R.: Clinical Value of Complement Fixation in Tuberculosis, *Jour. A. M. A.*, 1916, lxxvii, 1519.

2. Craig, C. F.: Complement Fixation Test in the Diagnosis of Tuberculosis, *Jour. A. M. A.*, 1917, lxxviii, 773.

3. Petroff, S. A.: Serological Studies in Tuberculosis, *American Review of Tuberculosis*, 1917, i, 33.



Interior, of Agriculture, of Commerce and of Labor. The medical member of the Advisory Commission is Dr. Franklin H. Martin of Chicago, and Dr. F. F. Simpson of Pittsburgh is the Chief of the Medical Section of the Council of National Defense. In addition to these bodies there is a Committee of American Physicians for Medical Preparedness, composed of distinguished physicians in all parts of the country. The Missouri member of this committee is Dr. J. F. Binnie of Kansas City. By instruction from the Council of National Defense and the Advisory Commission the Committee of American Physicians for Preparedness has appointed in each state a state committee of nine members whose duty it is to ascertain the medical resources of the state. The State Committee has been ordered to appoint an auxiliary committee in each county to be known as the Auxiliary Committee for Medical Defense of \_\_\_\_\_ County in \_\_\_\_\_ State. The State Committee for Missouri consists of the following:

W. J. Frick, Chairman, Kansas City; Edward J. Goodwin, St. Louis; J. Franklin Welch, Salisbury; Willard Bartlett, St. Louis; John Y. Brown, St. Louis; Roland Hill, St. Louis; F. M. McCallum, Kansas City; Jabez N. Jackson, Kansas City; J. F. Binnie (member of the National Committee), Kansas City, and C. H. Wallace, St. Joseph. The county committees will receive instructions from the state committee or direct from Washington.

On another page we publish a detailed account of these activities and the duties assigned to state and county committees. We urge every member to read the entire article so that they may be prepared to cooperate with the government in every possible way.

---

#### ACTION OF THE FORTY-NINTH GENERAL ASSEMBLY IN ENACTING THE MISSOURI CHILDREN'S CODE

Eleven of the forty-two bills in the Children's Code, prepared by the Missouri Children's Code Commission, were passed by the Forty-Ninth General Assembly. Of this number only four or five mark any great achievement, namely:

1. The bill creating juvenile courts in counties of less than 50,000 population.
2. The state-wide mother's pension act.
3. The bill making adoption and permanent transfer of custody of children a court proceeding.
4. The establishment of a state detention school for dependent children pending placement in foster homes.
5. The bill providing treatment of incorrigible minors over the juvenile court age (17 years) in the juvenile court.

In addition, the statutes relating to apprenticeship of children were repealed; a penalty was provided for county clerks who failed to report blind and deaf children to the state schools; and the lower age limits in the present statutes relating to admissions to the state schools for the blind and deaf were removed. The other two bills passed were revisionary measures, making the present statutes conform to the new juvenile court act.

The Missouri Children's Code Commission was appointed by the governor in 1915 to revise and codify the laws relating to children. Although state revenue measures were predominant during the 1917 session, the Children's Code bills had considerable right of way owing to their popularity over the state. Special committees were appointed in both houses to handle these bills, under the chairmanship of Hon. Edwin L. Moore of Lamar in the senate, and Hon. Frank H. Farris of Rolla in the house.

While many of the most important bills in the code were defeated, the commission feels that the active support of the people in the state and the generally favorable attitude of the legislature toward these laws are achievements of high importance and open the way for permanent progress in child welfare legislation in Missouri. A statewide educational and publicity campaign was conducted for four months before the Assembly convened. Nearly every county had an organization of men and women interested in the Children's Code. These groups conducted meetings, distributed literature on the proposed laws, interested the editors of their county papers, interviewed the members of the legislature before the session and secured letters and telegrams to them when the bills were up for passage.

One of the most important measures in the code was that creating county boards of welfare to administer all of the laws relating to social betterment in the counties. This was reported favorably in both houses but was defeated in the senate.

The revision of the child-labor and compulsory school attendance laws received scant attention. This bill was long and complicated and the legislators seemed unable or unwilling to give it the detailed study it required.

The measures for the care and support of the child born out of wedlock were favorably received by the members of the Children's Code Committee in the senate but were refused engrossment after a two hour debate on the floor. There was an unusually favorable sentiment, however, among the members in both houses for some measure for the care and support of the illegitimate child.

The bill creating a division of child hygiene in the State Board of Health was killed in committee of both houses. It was probably the

most unpopular measure in the code and much opposition was directed at the provision authorizing medical inspection of children in the public schools of the state.

Governor Gardner has been requested to reappoint this or a similar commission to carry on the work for the passage of the remainder of the bills in the 1919 legislature. With the continued interest and support of the people in the state, little doubt is felt that the complete Children's Code will be enacted two years hence.

The commission wishes to thank the State Medical Association for its assistance in the preparation of the health measures in the code and for its support in the recent educational campaign.

M. L.

### A CREDIT BUREAU

The St. Louis Medical Society has established a credit bureau through which the members of that society will receive expert service in the collection of overdue accounts. That this kind of activity by the organized profession is a welcome aid is evidenced by the large number of requests for form letters received by the bureau immediately after the announcement that it was in operation. Besides collecting accounts the bureau will soon become a reliable source of credit information which cannot fail to be of great value to the members. On another page we publish the plan of operation of the bureau.

### SOCIETY OF CLINICAL SURGEONS

The clinical facilities of the two metropolitan centers of Missouri, it is conceded by all who have had occasion to note their variety and extent, can easily be transformed into rich fields of instructive demonstrations for local and visiting physicians. In Kansas City much has been done toward systematizing the clinical material for the benefit of visiting physicians, and in St. Louis an abundance of material is readily available for any occasion. This was demonstrated at the recent meeting of the Society of Clinical Surgeons which held its twenty-seventh semi-annual session in St. Louis, March 30 and 31. The membership of this society is limited to forty surgeons under the age of 55 years, at which age they are retired automatically to "senior members." The meetings are entirely clinical, no papers being read or discussed, and the programs are given exclusively by the members of the society residing in the city in which the meeting is held and by invited guests. On several occasions the society has made visits to the clinics of well-known European surgeons.

It should not be a difficult matter to estab-

lish a permanent organization of the clinical facilities in St. Louis and Kansas City so that all physicians might receive the benefit of the instruction to be gained at such centers whenever occasion brought them to the cities, and give local physicians many opportunities of viewing special work that would prove of great interest and value to them.

### AMENDMENT TO THE CONSTITUTION AND BY-LAWS

The following amendment to the Constitution and By-Laws was introduced at the 1916 session and held over under the rules until the session this year. It will be up for consideration at the Springfield meeting of the House of Delegates:

Dr. J. B. Norman of Tipton introduced an amendment to the Constitution as follows:

Amend Section 3 of Article VIII of the Constitution by striking out the word "President" in the first line of the section, and create a new section to be known as Section 4 of Article VIII, which shall read as follows:

"The President shall be elected by the Association in general session; but no person shall be eligible to the office of president who is not in attendance at that annual session or who has not been a member of the Association for at least two years."

(Signed) J. B. NORMAN,  
GUY TITSWORTH.

### OBITUARY

#### ELIJAH F. MILLER, M.D.

Dr. E. F. Miller, a graduate of the American Medical College, 1880, and the Kansas City Homeopathic Medical College, 1896, died at his home in Verdella, Barton County, from pneumonia, March 21, 1917. He was for many years a faithful member of the Barton County Medical Society and the Missouri State Medical Association.

#### HENRY CLAY MITCHELL, M.D.

Dr. Henry Clay Mitchell, formerly of Lamonte, Pettis County, but lately a resident of Kansas City, a graduate of the Marion Sims Medical College, 1898, died at the Grace Hospital in Kansas City, March 28, from pneumonia. Dr. Mitchell was a member of the Pettis County Medical Society and the Missouri State Medical Association. Two brothers who are physicians survive him, Drs. J. D. Mitchell of Sedalia and J. E. Mitchell of Hughesville, and both of them are members of our Association.



## NEWS NOTES

DR. JAMES JETT of Linn, Mo., who was operated on recently has recovered and has again taken up his practice.

DR. JOHN M. GRANT and Dr. Henry Gettys of St. Louis, have been elected members of the St. Louis Board of Education.

DR. W. P. BRADLEY, superintendent of State Hospital No. 3, Nevada, has been reappointed superintendent of the institution by the board of managers to serve for four years.

THE laboratory is a hand-maiden of modern medicine whose importance grows constantly. Actual tests are such a help in diagnosis, replacing fallible human judgment with the certainty of science, that the increasing use of them is not to be wondered at. The reports of the clinical laboratories of the Battle Creek Sanitarium for 1916 show a total of 62,582 examinations. As there were about 7,000 patients in the year, the average per patient was about 9.

THE annual meeting of Alienists and Neurologists will be held Monday, July 9, to Thursday, July 12, 1917, in the Red Room, LaSalle Hotel, Chicago, under the auspices of the Chicago Medical Society. Dr. George A. Zeller will act as chairman. The program will be mailed June 28, with abstract of each paper. Contributors to the program are solicited. This is a society without a membership fee. Address, Secretary A. and N., Rooms 1218-30, N. Michigan Ave., Chicago.

THE Eye, Ear, Nose and Throat Club of Kansas City is a newly formed body organized for the purpose of stimulating scientific advancement among these specialists in the Middle West, as well as to engender a spirit of good fellowship between them. Surgical clinics will be held every two months, in the winter, followed by a dinner and a literary program in the evening.

The first meeting was held in Kansas City on April 5 at the General Hospital. Dr. J. S. Weaver, of Kansas City, is president.

"THE United States is the only great industrial nation without compulsory health insurance," Professor Irving Fisher has said recently. In view of this need, the National Conference of Charities and Corrections has provided an entire division on the subject of social insurance for its meetings at Pittsburgh, June 6-13. The chairman of this series of discussions is Max Senior of Cincinnati. The program has been arranged to occur the latter part of the conference period so as to accommodate medical men who attend the meeting of the American Medical Association in New York.

THE American Proctologic Society will hold its annual meeting at New York City, June 4 and 5, with headquarters and place of meeting at the Hotel Astor. Among the thirteen papers announced for the program are two by St. Louis physicians: "Should the Sphincters Be Divided" by Dr. Rollin H. Barnes, and "Enemas and Colonic Flushing as Etiologic Factors in Appendicitis" by Dr. William H. Stauffer. Rectal clinics will be held by Drs. Samuel G. Gant and Jerome M. Lynch. Dr. A. J. Zobel of San Francisco is president and Dr. Collier F. Martin of Philadelphia is secretary of this society.

SINCE February 1 the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Merck and Company: Optochin; Optochin Hydrochloride.

E. R. Squibb and Sons: Tablets Sodium Chloride and Citrate-Squibb (Dr. Martin H. Fischer).

Nonproprietary articles: Ferric Cacodylate.

H. K. Mulford Company: Iron Cacodylate Ampules, 0.03 Gm., Mulford.

E. R. Squibb and Sons: Ampoules Iron Cacodylate, 0.03 Gm., Squibb.

THE "Armour Year Book" for 1917 is a digest of the Armour industries and the methods by which their business is conducted. The facts as set forth in this book have been collected with the aim of creating a better and more widespread understanding of Armour & Co.'s function in the gathering of livestock and produce and the preparation, sale and distribution of the finished products. They believe that with such understanding there will also be a realization that this function is a necessary one, and that it truly conserves values for producer and consumer alike. The book is very attractively produced and contains much interesting information about this wonderful industry.

WASHINGTON UNIVERSITY, St. Louis, has arranged a series of lectures, primarily for nurses but open to others with the approval of the Directory of Extension Courses, on the general subject of "Social Background of Public Health Nursing in St. Louis." Six lectures have been delivered. The series for May follows:

May 3—St. Louis Health Department—Dr. G. A. Jordan.

May 10—Health Needs in St. Louis—Mr. Roger Baldwin.

May 17—St. Louis Child Welfare Work—Mr. Alfred Fairbank.

May 24—Infant Welfare Work in St. Louis—Dr. B. S. Veeder.

May 31—Child Labor Legislation—Professor C. E. Persons.

The lectures are delivered in Room 106, University Hall, at 4:30 p. m.

THE United States Public Health Service has taken cognizance of the dangers of poisonous fly papers. This is extracted from supplement No. 29 of the Public Health Reports:

"Of other fly poisons mention should be made merely for the purpose of condemnation, of those composed of arsenic. Fatal cases of the poisoning of children through the use of such compounds are far too frequent, and owing to the resemblance of arsenical poisoning to summer diarrhea and cholera infantum, it is believed that the cases reported do not by any means comprise the total. Arsenical fly-destroying devices must therefore be rated as extremely dangerous and should never be used, even if other measures are not at hand."

There seems to be no sufficient reason for permitting the unrestricted sale of arsenical fly destroyers and it would be well if other states followed the lead of Michigan in this and regulated their sale.

THE electrical equipment in hospitals and private offices of physicians is one of the most valuable aids to the practitioner, and keeping it in perfect condition at all times is essential to its usefulness. The John McIntosh Company has for years maintained a service department through which physicians may obtain intelligent and quick attention to electrical equipment in emergencies and an inspection of such apparatus by representatives of the company from time to time. The John McIntosh Company is the agent of the Victor Electric Corporation in this territory, and they invite correspondence from our members who may be in need of such service or apparatus. For further particulars see their announcement in our advertising pages. The message from the president of the Victor Electric Corporation published in their space in the advertising department of this issue is an encouraging evidence of the growth of the modern trend toward truthful statements in advertising and the desire of the seller to protect the buyer.

ON March 30 the Society of Clinical Surgeons began a two days' session at St. Louis, during which time numerous clinics were held. On the first day the program consisted of operations by members of the Barnes Hospital staff, Drs. F. T. Murphy, M. B. Clopton, and, by invitation, Drs. E. Sachs, Nathaniel Allison, V. P. Blair and J. R. Caulk. In the afternoon

of that day the following demonstrations were given by invitation:

Dr. Walter Mills: Studies of gastro-intestinal conditions with Roentgen ray.

Dr. A. Terry: Combined cranial and clavicular defects; demonstration of case.

Dr. Joseph Erlanger: Demonstration of mechanics of sounds heard during estimation of blood pressure by auscultation.

Dr. E. L. Opie: Tuberculosis of childhood and apical phthisis.

The annual dinner was held at the Country Club at 7:30 p. m.

In the forenoon of March 31 the society met at St. Anthony's Hospital from 9 to 12:30, where a clinic was held by Dr. Willard Bartlett and, by invitation, his former assistants, Drs. H. S. McKay, Ellis Fischel, O. F. McKittrick and A. H. Cleveland. The following program was carried out:

Operation: Supravaginal hysterectomy.

Infiltration anesthesia—Dr. Fischel.

Demonstration: Records and charts. Device for illuminating operating table.

Suture and ligature specialties—Dr. McKay.

Demonstration of cases: Result of breast reconstruction and radical breast operation.

Operation: Postoperative herniotomy with fascia transplant.

Demonstration: Result of ligating common carotid artery—Dr. McKittrick.

Lung exploration—two stages.

Result of fracture operations—Dr. Fischel.

Operation: Cholecystectomy and appendectomy.

Operation: Aneurysm, superficial palmar arch—Dr. McKay.

Operation: Total abdominal hysterectomy and repairs of pelvic floor.

Diffuse polyposis of the colon—Dr. Soper (by invitation).

Operation: Pelvic exploration—infiltration anesthesia.

Result of Balfour operation for cancer of rectum—Dr. McKay.

The afternoon was spent at Washington University where special demonstrations were given by Drs. Murphy, Clopton, Dock, Allison, Caulk and other members of Washington University faculty.

The following members of the society were in attendance: Chas. H. Mayo, D. C. Balfour, J. F. Binnie, Geo. W. Crile, W. P. Lower, Carl B. Davis, M. L. Harris, A. B. Kanavel, Dean D. Lewis, E. Wyllis Andrews, A. D. Bevan, L. L. McArthur, A. J. Oschner, Elsworth Eliot, Chas. H. Peck, G. E. Brewer, J. M. T. Finney, W. D. Haggard, D. F. Jones, F. B. Lund, C. A. Porter, J. L. Yates and J. F. Mitchel.



## MEMBERSHIP CHANGES, APRIL, 1917

## NEW MEMBERS

Arthur G. Beall, Modena, R. D. Mill Grove.  
 Riley F. Cheatham, Diamond.  
 Wm. J. Ezickson, Webb City.  
 Luther J. Ferguson, Brookfield.  
 Will J. Harned, Ardmore.  
 Alfred W. Harrison, Warrensburg.  
 Jay Hugh Lamb, Redford.  
 Abner Jackson Mynatt, Jerico Springs.  
 James E. Neeley, Elmo.  
 Jos. Pinquard, Willow Springs.  
 James L. Schooler, Jasper.  
 Charles A. Talbott, Waynesville.  
 Quincy A. Tipton, Cottonwood Point.  
 James Albert G. Tonge, Wakenda.  
 Tom Twyman, Independence.

## CHANGE OF ADDRESSES

Bert B. Babcock, St. Joseph, to Forest City..  
 George W. Belshe, Laredo, Tex., to Trenton, Mo.  
 Eugene P. Cockrell, Webster Groves, to Somers, Mont.  
 F. R. DeHoney, Cornwall, to Fredericktown.  
 C. R. Dudley, 1501 Locust St., to Berlin Hotel, St. Louis.  
 Walter J. Eilerts, Nardin, Okla., to Eldorado, Kan.  
 O. P. Farrington, Moundville, to Miller.  
 J. W. Ferguson, St. Joseph, to Kansas City.  
 Eugene C. Gehrung, Hotel Parkhurst, to 629 Broadway, St. Louis.  
 R. H. Goodier, Monroe City, to Hannibal.  
 Wm. F. Grote, Olivia Bldg., to 4403 Clarence St., St. Louis.  
 Ferdinand F. Haas, St. Louis, to 1018 Spruce, Philadelphia, Pa.  
 Walter E. Hennerich, City Hospital, to 3603 Utah Pl., St. Louis.  
 Leo C. Huelsmann, Cragmor Sanitarium, to 1827 N. Tejon St., Colorado Springs, Colo.  
 H. D. Jerowitz, Gordon-Kopple Bldg., to 329-330 Argyle Bldg., Kansas City.  
 Frederick H. Kampf, 3975 Olive St., to General Delivery, St. Louis.  
 George L. Koch, Rialto Bldg., to 520 Chambers Bldg., Kansas City.  
 J. A. Konzelman, 302 Wall Bldg., to 6122 Page Ave., St. Louis.  
 John Lavan, 5723 Kingsbury to Sportsmen's Park, St. Louis.  
 C. J. Laws, Trenton to Princeton.  
 Herbert Lee, 109½ N. Eighth St., to 501 N. Tenth St., St. Joseph.  
 Hugh Miller, 800 Rialto Bldg., to 520 Chambers Bldg., Kansas City.  
 Thos. F. Miller, 2736 Holmes St., to General Hospital, Kansas City.  
 G. E. Muns, Columbia, to Syracuse, N. Y.  
 L. O. Nickell, Holliday to Macon.

Joseph Pinquard, Willow Springs, to Kingston, Tenn.

G. Wm. Poehl, 5114 Von Vernon to 5103 Delmar Ave., St. Louis.

Max Pollock, 1129 N. Seventh St., to 3659a Grand Ave., St. Louis.

F. N. Pugsley, 701 Highland Ave., to 531 Knickerbocker, Kansas City.

W. L. Ragan, Richland, to Miller.

S. D. Reynolds, St. Joseph, to Gower.

Henry A. L. Rohlfing, 2602 Laclede Ave., to 3503 Halliday, St. Louis.

Hans Schaerrer, Hartsburg, to Chamois.

W. L. Sharp, Columbus, N. M., to Saline City, Mo.

Wm. A. Smith, 122 W. Lockwood, to 24 South St., Webster Groves.

Clyde Switzer, Twelfth and Troost, to 311 New Center Bldg., Kansas City.

L. M. Thompson, Atlanta, to Nickelltown.

C. A. Trotman, 5193 Von Verson, to 3047 N. Taylor Ave., St. Louis.

## REINSTATED

P. M. Mayfield, Portageville.

Corey A. Nickell, Mayview.

## TRANSFERRED

Louis Boonshaft, Los Gatos, Calif., to California Medical Society.

## DROPPED

J. E. Bankhead, Clarksville.

F. A. Lindsay, Hoisington, Kan.

Jesse Reel, Foley.

L. W. Tandy, Creighton.

## DECEASED

Oscar N. Carter, Republic.

E. F. Miller, Liberal.

H. Clay Mitchell, Kansas City.

W. P. Stuckle, Conception Junction.

## MISCELLANY

## MEDICAL PREPAREDNESS

BY THE COUNCIL OF NATIONAL DEFENSE  
 WASHINGTON, D. C.

Under existing conditions it is desirable that every physician as well as every other loyal citizen of America should be prepared to render active service to the Federal Government, remembering that the protection afforded by the government has made it possible for its citizens to enjoy liberty, peace and prosperity.

The avenues through which the most effective service can be rendered by members of the medical profession have taken definite and concrete form. Briefly, the plan is that all medical activities should cooperate with the Council of National Defense.

It would seem desirable at this time to state explicitly just what the Council of National Defense and its various agencies are.

The Council of National Defense was created by act of Congress, Aug. 29, 1916.

Sec. 2. That a Council of National Defense is hereby established, for the coordination of industries and welfare, to consist of the Secretary of War, the Secretary of the Navy, the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, and the Secretary of Labor.

That the Council of National Defense shall nominate to the President, and the President shall appoint, an advisory commission, consisting of not more than seven persons, each of whom shall have special knowledge of some industry, public utility, or the development of some natural resource, or be otherwise specially qualified, in the opinion of the council, for the performance of the duties hereinafter provided . . .

That the Council of National Defense shall adopt rules and regulations for the conduct of its work, which rules and regulations shall be subject to the approval of the President, and shall provide for the work of the advisory commission to the end that the special knowledge of such commission may be developed by suitable investigation, research, and inquiry and made available in conference and report for the use of the council; and the council may organize subordinate bodies for its assistance in special investigations, either by the employment of experts or by the creation of committees of specially qualified persons to serve without compensation, but to direct the investigations of experts so employed.

A committee of distinguished men was asked to present to the president names of medical men suitable for membership on the advisory commission. Dr. Franklin H. Martin of Chicago was selected.

The following statement was issued by President Wilson on the night of Oct. 11, 1916, in announcing his appointment of the civilian advisory members of the Council of National Defense:

The Council of National Defense has been created because the Congress has realized that the country is best prepared for war when thoroughly prepared for peace. From an economic point of view there is now very little difference between the machinery required for commercial efficiency and that required for military purposes.

In both cases the whole industrial mechanism must be organized in the most effective way. On this conception of the national welfare the council is organized in the words of the act for "the creation of relations which will render possible in time of need the immediate concentration and utilization of the resources of the nation."

The organization of the council likewise opens up a new and direct channel of communication and cooperation between business and scientific men and all departments of the government, and it is hoped that it will in addition become a rallying point for civic bodies working for the national defense. The council's chief functions are:

1. The coordination of all forms of transportation and the development of means of transportation to meet the military, industrial and commercial needs of the nation.

2. The extension of the industrial mobilization work of the Committee on Industrial Preparedness of the Naval Consulting Board and complete information as to our present manufacturing and producing facilities adaptable to many sided uses of modern warfare will be procured, analyzed and made use of.

One of the objects of the council will be to inform American manufacturers as to the part which they can and must play in national emergency. It is empowered to establish at once and maintain through subordinate bodies of specially qualified persons an auxiliary organization composed of men of the best creative and administrative capacity, capable of mobilizing to the utmost the resources of the country.

The personnel of the council's advisory members, appointed without regard to party, marks the entrance of the non-partisan engineer and professional man into American governmental affairs on a wider scale than ever before. It is responsive to the increased demand for and need of business organization in public matters and for the presence there of the best specialists in their respective fields. In the present instance the time of some of the members of the Advisory Board could not be purchased. They serve the government without remuneration, efficiency being their sole object and Americanism their only motive.

As indicated above, the Council of National Defense therefore consists of six members of the Cabinet as follows:

The Secretary of War, chairman.

The Secretary of the Navy.

The Secretary of the Interior.

The Secretary of Agriculture.

The Secretary of Commerce.

The Secretary of Labor.

The Advisory Commission of the National Defense consists of seven civilians appointed by the president. The members of the Advisory Commission are as follows:

Mr. Daniel Willard, president of the Baltimore and Ohio Railroad, chairman.

Mr. Hollis Godfrey, LL.D., president of Drexel Institute, Philadelphia.

Mr. Howard E. Coffin of Detroit (who is also chairman of the Committee on Industrial Preparedness of the Naval Consulting Board).  
Dr. Franklin H. Martin of Chicago.

Mr. Bernard Baruch, financier, of New York.

Mr. Julius Rosenwald, vice president of Sears, Roebuck & Co. of Chicago.



Mr. Samuel Gompers, president of the American Federation of Labor.

The two bodies meet in joint session at frequent intervals for the purpose of considering problems relating to national defense.

The executive activities of the Council of National Defense are coordinated and carried out through the medium of the director of the Council of National Defense, Mr. W. S. Gifford, and the chiefs of the various departments represented by the members of the Advisory Commission. Dr. Frank F. Simpson is chief of the Medical Section of the Council of National Defense.

#### THE ADVISORY COMMISSION

The organization of the council and of the Advisory Commission provides that each member of the Advisory Commission shall gather about himself for the most effective coordination of the activities he represents, a committee or board consisting of representatives of governmental departments on the one hand and civilian members on the other hand.

The Medical Committee, of which Dr. Franklin H. Martin is chairman, consists of:

William C. Gorgas, surgeon-general of the U. S. Army.

William C. Braisted, surgeon-general of the U. S. Army.

Rupert Blue, surgeon-general of the U. S. Public Health Service.

Col. Jefferson R. Kean, director-general of Military Relief of the American Red Cross.

Dr. William H. Welch, member of the National Council of Research.

Dr. William J. Mayo, chairman of the Committee of American Physicians for Medical Preparedness.

Dr. Frank F. Simpson, chief of the Medical Section of the Council of National Defense, and secretary of the Committee of American Physicians for Medical Preparedness.

Many medical problems which have bearing on the national defense are considered by Dr. Martin's committee and by the Advisory Commission and the Council of National Defense before being put into action by the governmental departments concerned.

#### COMMITTEE OF AMERICAN PHYSICIANS FOR MEDICAL PREPAREDNESS—ITS COMPONENT PARTS

*National and State Committees.*—In April, 1916, the national committee was appointed by the joint action of the presidents of the American Medical Association, the American Surgical

Association, the Congress of American Physicians and Surgeons, the Clinical Congress of Surgeons of North America and the American College of Surgeons. To that committee was delegated the responsible duty of formulating plans whereby the civilian medical resources of the United States might be ascertained and effectively coordinated for such purposes as might be required by the Federal Government.

The national committee organized, selected a chairman and secretary and an executive committee, and appointed a state committee of nine strong men in each state of the Union.

It is the fixed policy of this committee that all presidents and secretaries of the various state medical societies shall be members of their respective state committees during their incumbency in office. From the first it was contemplated that at the proper time the organization of committees would be perfected in each county of the country. That time has now come and county committees are being rapidly organized.

In each instance the state committees are expected to select the county committees and to supervise their formation.

*Name and Personnel of County Committees.*—It is the fixed policy of the Committee of American Physicians for Medical Preparedness that the various important medical interests and activities of each county shall be represented on the county committees. This is done for the purpose of coordinating the important interests and activities so that the medical profession of the nation may present a compact and effective organization for the purpose of aiding effectively in the national defense. In order that this plan may be carried out with uniformity and precision throughout the country, the various state committees have been requested to have all county committees bearing the following distinguishing name, to wit, The Auxiliary Medical Defense Committee of ——— County, in ——— State. The state committees have also been requested to provide that the county committees shall include the following in their list of members:

1. All members of National Committee of the Committee of American Physicians for Medical Preparedness, resident in the individual county.

2. Members of the state committee resident in or near the individual county.

3. Representatives of the U. S. Army resident in the individual county.

4. Representatives of the U. S. Navy resident in the individual county.

5. Representatives of the U. S. Public Health Service resident in the individual county.

6. Representatives of the State Board of Medical Examiners residing in the individual county.

7. Representatives of the state or city public health service.

8. Ranking medical officer of the National Guard.

9. President and secretary of the local medical officers' reserve corps association, if there should be such an organization.

10. Deans of medical schools.

11. President and secretary of the county medical society.

12. President and secretary of any other important medical societies.

13. Medical director of the local Red Cross units.

14. Other representative medical men.

#### DUTIES OF COUNTY COMMITTEES

From time to time specific duties will be assigned to the various state and county committees. These duties will be in accord with the policy of the Council of National Defense, and should be executed promptly and precisely by those who are called on to cooperate in this manner with the Council of National Defense.

The committees will call to their assistance those who have been appointed field aides by their various state committees and such other physicians as they may desire to have cooperate with them.

Among the specific duties which the county committees are requested to perform at this time are the following:

1. That these committees cooperate with the national and state committees of the Committee of American Physicians for Medical Preparedness in their efforts to gain needful information regarding the civilian medical resources of their own communities, and in their efforts to coordinate civilian medical activities for prompt mobilization in case of need.

2. That they secure applicants:

(a) For the Army Medical Corps. If the president should call the full complement of troops already authorized by Congress, the Regular Army would need about 1,200 additional medical officers. If a million men should be called, a corresponding increase would be required.

(b) For the Medical Officers' Reserve Corps from 20,000 to 30,000 medical reserve officers should be enrolled.

(c) For the Naval Medical Corps which needs about 350 additional officers.

(d) For the Coast Defense Reserve Corps of the Navy. Several hundred high class reserve medical officers are desired.

(e) For the National Guard, such numbers as may be required to bring your local National Guard to full strength.

In the preparation for national defense the first thing needed will be medical officers.

Physicians recommended for such service should be of the highest type. They should be free from suspicion of addiction to drugs or drink.

Medical officers who go to field duty should by preference be under the age of 45.

3. That they cooperate, individually and collectively, with the Medical Department of the Army, Navy and Public Health Service and with the Council of National Defense.

4. That they cooperate with the Red Cross in their efforts to bring that organization to the highest point of efficiency.

*Committee of American Physicians—Activities Accomplished and in Progress.*—April 26, 1916, the Executive Committee of the Committee of American Physicians tendered the services of the committee to the president of the United States. He expressed himself as being pleased with the patriotic tender of services and regretted that existing laws did not permit the acceptance by the Federal Government of gratuitous services, but stated that the matter would be referred to the Secretary of War and the Secretary of the Navy for the purpose of devising plans by which the good offices of the medical profession could be accepted and utilized to best effect by the Federal Government. He further stated that the plans would be referred to the Committee of American Physicians for comments and suggestions. The Executive Committee was permitted to make suggestions regarding the bill creating the Council of National Defense.

During the last year this committee and its various subsidiary bodies have been actively engaged in formulating and carrying out various activities in conformity with the general plans for national defense, which have been undertaken by the Federal Government.

The splendid work done by the various state



and other committees was of such extent and value that the Council of National Defense at its first meeting requested the Committee of American Physicians to continue their various activities under the guidance of the Council of National Defense, and asked the secretary of the Committee of American Physicians to act as chief of the Medical Section of the Council of National Defense. Since that time the various activities have gone forward with renewed energy.

Some of the activities which have either been completed or are well under way follow.

1. Some 20,000 medical men selected from all parts of the country have been classified according to the training and the kinds of work which they do best.

2. An inventory of hospitals and other medical institutions is well under way.

3. It has been the fixed policy of the Committee of American Physicians to aid the American Red Cross in bringing its medical department to the highest point of efficiency. With that object in view, and in order to foster the spirit of cooperation, the members of the National Committee of the Committee of American Physicians accepted invitations to become members of the national committee of the medical department of the American Red Cross. In order further to promote the harmonious cooperation of the two organizations, most of the members of the various state committees of the Committee of American Physicians were also made members of the state committees of the American Red Cross. The various county committees will also be expected to cooperate in carrying out the plans of the two organizations.

4. The establishment of military training for senior medical students in a large percentage of the high grade medical schools of the country.

5. The establishment of more effective military training for hospital groups for members of the Medical Officers' Reserve Corps, for dental students and others.

6. The appointment of a Committee for the Standardization of Medical and Surgical Supplies and Equipment. The purpose of this work is to designate a list of articles essential to the successful conduct of civilian and military medical and surgical activities so that in the event that it should become necessary to curtail production all the energies of the drug and instrument makers would be devoted to necessary articles rather than to those which are desirable but not essential. On this Standardization Committee are representatives of the army,

the navy, the Public Health Service, the Red Cross, the Council of National Defense and a number of the most distinguished members of the various specialties of civilian medicine. In their work of coordination and standardization this committee will take counsel with the manufacturers of the various supplies under consideration.

7. Much valuable information supplied by medical and other observers who have worked in the war zones of Europe is being gathered and classified.

8. The presidents of important national medical organizations of the country have been requested to suggest to the medical section of the Council of National Defense the kinds of work which members of those organizations are best fitted to perform, and to suggest plans whereby their activities and resources might be utilized to best advantage. This request does not contemplate an inventory and organization of these resources. The purpose is that having received suggestions offered by the various organizations, those suggestions will be maturely considered and such as conform to the plans of the Council of National Defense and can be utilized to advantage, will be adopted. The various organizations will, in that case, be requested to cooperate fully and promptly in perfecting the plans of the Council of National Defense.

The foregoing memorandum embodies only a very small percentage of the problems now under consideration. It is neither wise nor desirable, however, to present them in detail at this time.

---

#### THE COLLECTION DEPARTMENT AND CREDIT BUREAU OF THE ST. LOUIS MEDICAL SOCIETY

This new department of the society, to be officially known as the "Credit Bureau of the St. Louis Medical Society," is now in operation. A corps of competent and trustworthy collectors supervised by Mr. Joseph Broderick has been retained. The efficient work of Mr. Broderick is known to many of our members and we are exceptionally fortunate in securing his services. Mr. John E. Mooney, recently appointed Excise Commissioner of St. Louis County with offices down-town, will direct the legal department. Miss Bessie Massot will be in charge of the office and will handle all accounts, issue credit information, etc., acting under instructions from the Managing Committee. Miss Massot has had five years' experience in this particular line of work and comes to us directly from one of our prominent mercantile agencies.

Steps are being taken, and with every promise of success, to secure the cooperation of several of the foremost credit bureaus in the city. We are equipped to give you class "A" service. We want your wholehearted support.

## THE BUREAU WILL

1. Give you a confidential rating on a patient by phone.
2. Collect your current accounts (if possible) for 10 per cent.
3. Collect accounts, four months to one year, for 30 per cent.
4. Collect accounts, over one year and under two years, for 35 per cent.
5. Collect accounts over two years old for 50 per cent.
6. Charge 50 per cent. for all accounts under \$5.00.
7. Send you a monthly statement of amount collected with check for the amount less the cost of collection.

## DUTIES OF MEMBERS

1. Send *monthly* statements to debtors.
2. Send one special form letter as furnished by the Bureau before listing a debtor as a delinquent.
3. Send a quarterly statement of delinquent debtors to the Bureau.
4. Turn over your accounts to the Bureau for collection.
5. Request cash for service rendered listed debtors.
6. Urge listed debtors to pay the account for which listed.
7. Furnish the Bureau with any information he may possess that will aid in the collection of listed accounts.

## METHODS PURSUED BY THE BUREAU

The customary number of monthly statements having failed to produce results you will send form letter number one which will be furnished by the Bureau at 5 cents per copy. Should this letter fail to secure a response the account is placed with the Bureau. The debtor then receives form letter number two. Ten per cent. will be charged for all accounts collected by this letter. When the allotted time has expired the account is placed with the legal department. Every effort is made to secure results without resorting to legal procedure.

## WHAT THE BUREAU WILL ACCOMPLISH

1. The elimination of the deliberate dead-beat.
2. The education of the public to understand that a physician's bill must be paid the same as any other obligation. That a good rating in the regular mercantile agencies is dependent on the way in which it meets its obligations to the medical profession.
3. The refutation of the popular belief that medical men are devoid of business sense.

## POINTS TO BE KEPT IN MIND

1. That this is your collection agency and credit bureau, that your money is being used to conduct it and that you are suffering an actual loss if you fail to make use of it.
  2. That you can quickly "kill" the Bureau in your own estimation and discourage those in charge of it if you send in your two or three year old accounts and expect prompt results. We want these accounts at once chiefly for the credit information contained in them. They will be run through in routine fashion and earnest effort made to obtain settlement.
- Strict compliance with the regulations set forth above will quickly create a new condition in the business affairs of the medical profession. Much of the imposition now being practiced on the physician will be eliminated.—*Bulletin St. Louis Medical Society.*

## SOCIETY PROCEEDINGS

## COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Wright County Medical Society, Dec. 5, 1916.  
 Webster County Medical Society, Dec. 6, 1916.  
 Platte County Medical Society, Dec. 8, 1916.  
 Cape Girardeau County Medical Society, Dec. 15, 1916.  
 Livingston County Medical Society, Dec. 16, 1916.  
 Madison County Medical Society, Dec. 17, 1916.  
 Carter-Shannon County Medical Society, Dec. 20, 1916.  
 Atchison County Medical Society, Dec. 26, 1916.  
 Linn County Medical Society, Dec. 30, 1916.  
 Clark County Medical Society, Dec. 30, 1916.  
 Benton County Medical Society, Dec. 30, 1916.  
 Chariton County Medical Society, Jan. 1, 1917.  
 Schuyler County Medical Society, Jan. 5, 1917.  
 Crawford County Medical Society, Jan. 9, 1917.  
 Adair County Medical Society, Jan. 10, 1917.  
 Dent County Medical Society, Jan. 10, 1917.  
 Mississippi County Medical Society, Jan. 16, 1917.  
 Camden County Medical Society, Jan. 23, 1917.  
 Barton County Medical Society, Jan. 30, 1917.  
 Scott County Medical Society, Feb. 13, 1917.  
 Cooper County Medical Society, Feb. 21, 1917.  
 Gentry County Medical Society, Feb. 28, 1917.  
 Marion County Medical Society, March 1, 1917.  
 Ralls County Medical Society, March 13, 1917.  
 Perry County Medical Society, March 20, 1917.  
 Ste. Genevieve County Medical Society, March 27, 1917.  
 Reynolds County Medical Society, March 30, 1917.  
 Polk County Medical Society, April 7, 1917.  
 Pike County Medical Society, April 11, 1917.  
 Howell County Medical Society, April 17, 1917.  
 Cass County Medical Society, April 18, 1917.

## MISSOURI STATE MEDICAL ASSOCIATION

Sixtieth annual meeting Missouri State Medical Association, Springfield, May 14, 15 and 16.

## PROGRAM

## House of Delegates

FIRST DAY—MONDAY, MAY 14, 1917

## THE ORDINARY COLONIAL HOTEL

House of Delegates called to order at 9:00 a. m.  
 Roll call.

Reading of minutes of previous meeting.

Reading of president's message and recommendations.

Appointment of Committee on Nominations.

Report of Committee on Arrangements.

Report of the Judicial Council.

Report of Secretary.

Report of Treasurer.

Report of Committee on Scientific Work.

Report of Committee on Health and Public Instruction.

Report of Defense Committee.

Report of Publication Committee.

Report of Committee on Medical Education

Report of Committee on Constitution and By-Laws.



Report of Committee on Cancer.  
 Report of Committee on Blindness.  
 Report of Committee on Vaccination.  
 Report of Committee on Expert Testimony.  
 Report of Committee on Necrology.

RECESS TILL 3 P. M.

Report of Judicial Council.  
 Reports of Reference Committees.  
 Reading of Resolutions, Memorials, etc.  
 Report of Committee on Nominations.  
 Election of President.  
 Selection of place of next meeting.  
 Miscellaneous business.

#### JUDICIAL COUNCIL

Judicial Council meets at 1 p. m., in Physicians' Club Rooms, 317 Woodruff Building.

1st District.....E. L. Crowson, Pickering  
 2d District.....O. C. Gebhardt, St. Joseph  
 3d District.....G. W. Whiteley, Albany  
 4th District.....J. B. Wright, Trenton  
 5th District.....J. R. Bridges, Kahoka  
 6th District.....A. C. Crank, Canton  
 7th District.....J. D. Smith, Shelbina  
 8th District.....L. W. Cape, Maplewood  
 9th District.....A. R. McComas, Sturgeon  
 10th District.....D. A. Barnhart, Huntsville  
 11th District.....G. W. Hawkins, Salisbury  
 12th District.....Spence Redman, Platte City  
 13th District.....Franklin E. Murphy, Kansas City  
 14th District.....C. T. Ryland, Lexington  
 15th District.....H. S. Crawford, Harrisonville  
 16th District.....E. N. Chastain, Butler  
 17th District.....W. J. Ferguson, Sedalia  
 18th District.....Frank DeVilbiss, Tipton  
 19th District.....S. V. Bedford, Jefferson City  
 20th District.....A. H. Hamel, St. Louis  
 21st District.....G. M. Rutledge, Ste. Genevieve  
 22d District.....G. S. Cannon, Fomfelt  
 23d District.....J. H. Timberman, Marston  
 24th District.....T. W. Cotton, Van Buren  
 25th District.....O. A. Smith, Farmington  
 26th District.....W. H. Breuer, St. James  
 27th District.....J. H. Elliott, West Plains  
 28th District.....T. O. Klingner, Springfield  
 29th District.....R. L. Wills, Neosho

#### GENERAL SESSION

TUESDAY, MAY 15, 1917—9 A. M.

##### LANDERS THEATER

Address of the President  
 J. Franklin Welch, M.D., Salisbury  
 Health Insurance and Its Influence on the Medical Profession (By Invitation)  
 Frederick R. Green, M.D., Chicago, Secretary, Council on Health and Public Instruction, A. M. A.  
 Intestinal Arrhythmia  
 C. C. Conover, M.D., Kansas City  
 Discussion.....Dr. William Engelbach  
 Intestinal Obstruction; Review of Experimental Observations, with Practical Suggestions  
 Jabez N. Jackson, M.D., Kansas City  
 Discussion.....Dr. Francis Reder  
 The Colon Group as a Pathogenic Agent  
 Frederick A. Baldwin, M.D., St. Louis

Infectious Diseases of Lower Bowel, with Lantern Slides.....William H. Stauffer, M.D., St. Louis  
 Discussion.....Dr. Frank J. Hall  
 Management of Tubo-Ovarian Infections  
 H. S. McKay, M.D., St. Louis  
 Discussion.....Dr. Ernest F. Robinson  
 Pernicious Anemia.....Lewis C. Calvert  
 Discussion.....Dr. A. C. Griffith

#### GENERAL SESSION

TUESDAY, MAY 15, 1917—1:30 P. M.

Correction of Deformity Due to Complete Loss of Nose, Most of Alveolar and Hard Palate  
 John F. Binnie, M.D., Kansas City  
 Discussion.....Dr. W. E. Leighton  
 Cystoscopic Examination of the Bladder in the Psychoses  
 Francis M. Barnes, M.D., and John R. Caulk, M.D., St. Louis  
 Discussion.....Dr. F. M. McCallum  
 The Involuntary or Autonomic Nervous System: Its Influence on Our Conception and Treatment of the So-Called Neuroses  
 Given Campbell, M.D., St. Louis  
 Discussion.....Dr. S. A. Johnson  
 Antisyphilitic Treatment Among the Insane  
 Hermon S. Major, M.D., Fulton  
 Discussion.....Dr. G. Wilse Robinson  
 Urogenital Tuberculosis  
 Clarence S. Capell, M.D., Kansas City  
 Discussion.....Dr. H. J. Scherck  
 Course and Treatment of Urethral Strictures  
 Leo G. Bartels, M.D., St. Louis  
 Discussion.....Dr. J. P. Henderson  
 Pyloric Stenosis in Infancy: Some Medical and Surgical Aspects  
 B. S. Veeder, M.D., and Malvern B. Clopton, M.D., St. Louis  
 Discussion.....Drs. F. C. Neff and T. G. Orr  
 Mechanical Gall Bladders  
 W. T. Reynolds, M.D., Kansas City  
 Discussion.....Dr. R. E. Schlueter  
 Preservation of Arm Function After Operations for Carcinoma of the Breast  
 William T. Coughlin, M.D., St. Louis  
 Discussion.....Dr. Howard Hill  
 Physiologic Therapeutics  
 A. C. Ames, M.D., Mountain Grove

#### GENERAL SESSION

WEDNESDAY, MAY 16, 1917—9 A. M.

Report of Committee on Medical Education  
 A. W. McAlester, M.D., Columbia  
 A Plea for a County General Hospital, Standardized  
 Frank G. Nifong, M.D., Columbia  
 Discussion.....Dr. R. M. Funkhouser  
 Treatment of Dacryocystitis in Infants  
 John Green, Jr., M.D., St. Louis  
 Discussion.....Dr. R. J. Curdy  
 The Opaque Meal as a Diagnostic Aid in Gastro-Intestinal Complications  
 E. H. Kessler, M.D., St. Louis  
 X and Other Rays: Their Effect on Normal and Pathologic Tissues  
 Elmer L. Parker, M.D., Excelsior Springs  
 Discussion.....Dr. O. H. McCandless

- Certain Subacute and Chronic Joint Conditions  
Frank D. Dickson, M.D., Kansas City
- Anterior Poliomyelitis  
J. Archer O'Reilly, M.D., St. Louis
- Discussion.....Dr. C. B. Francisco
- Health Conditions in the Missouri State Penitentiary  
W. A. Clark, M.D., Jefferson City
- Fifty Years in the Practice of Medicine and Surgery  
Edgar A. Dulin, M.D., Nevada

### GENERAL SESSION

WEDNESDAY, MAY 16, 1917—1:30 P. M.

- Dental Asepsis and Its Relation to Systemic Disease  
W. W. Duke, M.D., Kansas City
- Discussion.....Dr. V. P. Blair
- Adult Thymus..George H. Hoxie, M.D., Kansas City
- Discussion.....Dr. Walter Baumgarten
- Factors for Safety and Ultimate Results in Goiter Operations, with Report of Cases  
Caryl Potter, M.D., St. Joseph
- Discussion.....Dr. C. E. Hyndman
- Carcinoma of the Larynx  
R. H. Meade, M.D., Kansas City
- Discussion.....Dr. C. F. Pfingsten
- Treatment of Acute Rheumatic Fever  
J. Curtis Lyter, M.D., St. Louis
- Discussion.....Dr. E. P. Buddy
- Obstetric Résumé  
Fred T. Van Eman, M.D., Kansas City
- Discussion.....Dr. E. Lee Dorsett
- Progress in Obstetrics  
B. G. Hamilton, M.D., Kansas City
- Control and Treatment of Criminal Abortion  
Raymond M. Spivy, M.D., St. Louis
- Discussion.....Dr. R. L. Thompson
- Fallacy of Chiropractic Claims  
J. D. Seba, M.D., Bland
- Discussion.....E. C. Wittwer

### NINTH ANNUAL MEETING OF MISSOURI SOCIETY OF MEDICAL SECRETARIES

Springfield, Tuesday, May 15, 1917

#### OFFICERS

- President—Dr. O. B. Hall, Warrensburg, Mo.
- First Vice President—Dr. J. J. Gaines, Excelsior Springs, Mo.
- Second Vice President—Dr. J. D. Smith, Gallatin, Mo.
- Secretary-Treasurer—Dr. J. Q. Cope, Lexington, Mo.

PHYSICIANS' CLUB ROOMS—1:30 P. M.

- Our Way of Conducting Medical Society Meetings  
Dr. John D. Seba, Bland, Mo.
- Some of the Secretary's Duties and His Part in Securing Interest in the County Medical Society  
Dr. J. F. Roberts, Bolivar, Mo.
- Topic for General Discussion: (a) Relation of the County Society to the Public  
(b) Benefits of Organized Medicine  
(c) Suggestions for the Good of the Secretaries

SECRETARIES' BANQUET, COLONIAL HOTEL

TUESDAY, MAY 15, 1917—6 P. M.

- Address.....J. Franklin Welch, President

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of the General Society

March 24, 1917

The meeting convened at 8:35 p. m., Dr. Albert H. Hamel presiding.

The minutes of the previous meeting were read and approved.

Dr. Rollin H. Barnes introduced the guest of the evening, Dr. Jerome M. Lynch of New York.

Dr. Lynch read a paper entitled "Cancer of the Rectum and Colon."

The discussion was opened by Dr. William H. Stauffer and continued by Drs. William E. Leighton, Francis Reder, Major G. Seelig, Walter C. G. Kirchner and Miles B. Titterington; Dr. Lynch closing.

Dr. J. Curtis Lyter announced that the committee appointed to draw up resolutions to be presented to the national representatives and senators looking towards the suspension or abrogation of patents on salvarsan in the event of a declaration of war would not be ready to report until Saturday, March 31.

The secretary read a letter from the Missouri State Medical Association relative to an amendment in the Constitution of the Missouri State Medical Association.

Dr. Funkhouser made an oral report on medical legislative matters.

Dr. Theodore P. Brookes, president of the Medical Society of the City Hospital Alumni Association, extended an invitation to the members of the St. Louis Medical Society to attend their special meeting on Thursday, March 29, at 8:30 p. m.

Attendance, 132.

WENZEL C. GAYLER, Secretary pro tem.

#### APPLICANTS FOR MEMBERSHIP

Any member of the society who knows a good or sufficient reason why anyone of the following applicants is not eligible for membership in our society is requested to communicate at once with the Membership Committee.

Irving H. Boemer, St. John's Hospital. Sponsors: John Young Brown, William Engelbach.

Joseph Davie, Century Bldg. Sponsors: John Young Brown, Claude D. Pickrell.

Robert Vinyard, Wall Bldg. Sponsors: Paul Y. Tupper, Harry M. Moore.

March 31

The meeting convened at 8:35 p. m., the president, Dr. Hamel, presiding. The minutes of the previous meeting were read and approved.

Dr. George Ives presented test tube reactions, demonstrating the Bruck sero-chemical test for syphilis. His conclusion was that the test is no more characteristic of syphilis than of tuberculosis.

Dr. Rutherford B. H. Gradwohl read a paper entitled "The New Blood Chemistry in Diagnosis and Prognosis."

The discussion was opened by Dr. John L. Tierney and continued by Drs. Charles H. Neilson, George W. Wilson and Edwin J. Schisler; Dr. Gradwohl closing.

Dr. Robert M. Funkhouser presented the following resolutions:

WHEREAS, The St. Louis Medical Society has expressed its disapproval of certain contemplated medical legislation, be it

*Resolved*, That this society extend a vote of thanks to Senator Michael Kinney for his timely aid in preserving the highest medical principles in the State of Missouri, and be it further

*Resolved*, That a copy of these resolutions be sent to the Senator.

On motion the above resolutions were unanimously adopted.

Attendance, 108. J. ALBERT SEABOLD, Secretary.



April 7

The meeting convened at 8:45 p. m., Dr. Albert H. Hamel presiding. The minutes of the previous meeting of March 31 were read and approved.

The scientific program consisted of a symposium on X-ray Therapeutics, as follows:

A paper entitled, "Treatment of Deep Malignant Tumors," by Dr. Edwin C. Ernst.

Dr. Elsworth Smith amplified the clinical findings in one of the cases reported by Dr. Ernst.

A paper entitled, "Superficial Malignant and Non-Malignant Skin Diseases," by Dr. Fred B. Hall.

A paper entitled, "X-ray Treatment of Non-Malignant Skin Diseases," by Dr. William H. Mook, illustrated with lantern slides.

Dr. William T. Coughlin presented a case of malignant growth of upper lip in an old man.

Discussion by Drs. Elsworth Smith, Edward H. Kessler and E. Lee Myers; Dr. Ernst closing.

Dr. Martin F. Engman reported for the special committee and introduced the following resolution:

WHEREAS, Salvarsan is a drug which is of vital importance to the protection of health and to the saving of life, and

WHEREAS, The patent rights conferred on salvarsan and its congeners, have created a monopoly which has permitted a price to be placed on the drug which makes it unavailable to tens of thousands of indigent sick in this country, and

WHEREAS, The drug has hitherto been supplied to this country from foreign shores and the supply during the war has been uncertain and insufficient, and

WHEREAS, The patents have prevented the preparation and distribution of the drug in this country by American laboratories, and

WHEREAS, The patents conferred are operating against the health interests and the public welfare of this country, therefore be it

*Resolved* by the St. Louis Medical Society, in session assembled, that Congress be earnestly urged to abrogate or at least suspend the patents on salvarsan and its closely related products.

The report was unanimously adopted and the committee discharged with an expression of appreciation for their work.

On motion a copy of the resolution was ordered sent to our representatives and senators in the congress.

The secretary read a letter from the American Red Cross requesting the doctors to volunteer their services to the dependent families of all enlisted men in the regular Army, the Navy, the Naval Reserves, National Guards, Aeroplane Service, etc. He also read the reply of the president assuring the American Red Cross that the society would be very glad to render all assistance possible to the families of enlisted men in any branch of the service.

On motion the president's action was approved.

Dr. Malcolm A. Bliss presented the following resolutions:

In view of the splendid record of achievement during the first administration of Mayor Kiel in all of the eleemosynary institutions of the city, and of the able and fearless management of the entire system by his appointee, Mr. Emil Tolkacz, who has placed St. Louis distinctly in the forefront of American cities in hospital administration, be it

*Resolved*, That the St. Louis Medical Society most heartily commends the work accomplished by Mr. Tolkacz and expresses the hope that nothing shall disturb the present exceptionally fortunate conditions in the Department of Public Welfare, and be it further

*Resolved*, That the St. Louis Medical Society expresses the approval of the organized medical profession of this city of the prevailing unit system in

the City Hospital, which insures to the patients the best possible medical and surgical care and to the profession an equitable share in the administration of their own municipal hospitals, and be it further

*Resolved*, That a copy of these resolutions be transmitted to the Mayor, and to Director of Public Welfare, Mr. Emil Tolkacz.

The resolutions were unanimously adopted.

Dr. Bliss moved that a committee of three be appointed to present the resolutions to the Mayor.

The chair appointed Drs. William E. Leighton, John B. Shapleigh and Cyrus E. Burford.

Attendance 116.

#### Meeting of April 14

The meeting was called to order at 8:35 p. m., Dr. Albert H. Hamel presiding. The minutes of April 7 were read and approved.

The scientific program consisted of the following:

Dr. Marsh Pitzman read a paper entitled, "Some Practical Points in Regard to Hernia."

Discussion opened by Dr. Francis Reder and continued by Drs. Alonzo R. Kieffer, Norville Wallace Sharpe, Robert E. Schlueter and Hudson Talbott, Dr. Pitzman closing.

Dr. E. Lee Dorsett read a paper entitled, "Report of Two Cases of Abdominal Cesarean Section for Eclampsia."

Discussion by Drs. Percy Swahlen, Quitman U. Newell and John Dawson Hayward; Dr. Dorsett closing.

Attendance 96.

J. ALBERT SEABOLD, M.D., Secretary.

### WASHINGTON UNIVERSITY MEDICAL SOCIETY

Fortieth Meeting, Feb. 12, 1917

#### 1. EXHIBITION OF CASES.

##### A. A CASE OF ARTERIOVENOUS ANEURYSM.

—By DR. DREW W. LUTEN.

The patient entered the hospital on account of shortness of breath and enlargement of the abdomen and it was found that he had rather advanced nephritis and cardiac disease. The arteriovenous aneurysm which involves the vessels of the left side of the chest and the left arm has caused him little inconvenience.

He dates occurrence of the aneurysm from the fall of an iron pipe on his clavicle about twenty-seven years ago. An X-ray of his chest showed what appeared to be the shadows of two bullets and smaller dense shadows apparently metal in the callus at the site of the fracture of the clavicle.

On subsequent questioning it developed that the patient observed nothing in the arm after the fracture of the clavicle by the iron pipe, but that two years after this he was shot by a pistol from the left side while partially intoxicated. He knew of a shot in the abdominal wall, but did not know of any injury to the chest. He noticed, however, while in the hospital following the abdominal injury that his arm throbbed and that this was relieved by elevating the arm. His expression was that "the blood pumped down into his arm."

After two years he noticed that the left hand was swollen and at times the arm was swollen. He has noticed enlargement of the vessels for ten years. There is a marked thrill and pulsation in the pouch-like enlargements that are present beneath the clavicle, down the arm, and in the elbow. The arm is considerably swollen and pulsation is felt in the veins of the hand.

## DISCUSSION

DR. GEORGE DOCK: When the man is lying down his arm is about half as big again as it is now and all the vessels are much more injected. These vessels in the shoulder form a very close spiral, the loops being edge to edge, and some of the vessels on the arm are over an inch in diameter.

### B. A CASE OF TABES WITH RIGHT SIDED HEMIPLEGIA AND CHARCOT JOINTS OF KNEES, WITH BABINSKI ON RIGHT SIDE.

—By DR. HARRY E. BUNDY.

Patient 58 years of age entered hospital with complaint of paralysis of the right side. Gave history of shooting pains in legs beginning in 1892 and enlargement of knees in 1900; tertiary lues at angle of mouth in 1904; treatment for two years; marital history negative. Case presents right sided hemiplegia with involvement of lower two branches of seventh nerve; asymmetry of face; Argyll Robertson pupils; motor aphasia; tongue protruding markedly to right of middle line; Charcot joints of both knees; knee jerks and Achilles not obtained; Babinski on right side.

First case reported by Hughlings Jackson and James Taylor and later by Dercum, their impressions being that the impulses conveyed to the cord by stimulation are usually insufficient to cause a reflex but the impulse may be strong enough or there may be enough fibers left intact to act on the anterior horns, whose irritability is increased due to the destruction of the pyramidal tract, thus causing the reflex.

## DISCUSSION

DR. M. A. BLISS: Can the plantar reflex be obtained by other methods than the irritation of the sole, in this case? It would be rather interesting, I thought, to know whether the Chaddock method and that of Oppenheim, have been tried.

As the doctor made his experiment there was a retraction of the great toe, I noticed, as the leg went down, so I wondered if that area of irritability did not extend quite a distance up the leg.

We have had a case similar to this, without the Charcot joint, at the City Hospital, that we observed for some two or three months, and we feel that the man was so well established in his tabes that there was no doubt about the disappearance of his jerks before, although we had no observation at the time.

### C. A CASE OF MULTIPLE ARTHRITIS WITH INVOLVEMENT OF THE KNEES AND ANKLES SECONDARY TO RECURRENT INFECTION OF THE SEMINAL VESICLES.—By DR. JOHN R. CAULK.

Patient had had repeated attacks of acute joint involvement, which had required prolonged confinement to the bed under the routine measures directed to the joints before the process had abated. In 1914 he had been incapacitated for practically a year. At the present time patient had been in the hospital under treatment to his joints, supported by general measures, for over three weeks without the slightest improvement in the joints. As the patient had quite a marked involvement of his prostate and seminal vesicles with a history of recurrent attacks of discharge and trouble, he was advised to have a vaso puncture in order to inject the seminal vesicles with argyrol. This was done under local anesthesia, and within twenty-four hours there was remarkable improvement in his joints, they had diminished materially in size, and the pain in a great measure subsided; within forty eight hours the knee joints looked almost normal in

size; the right ankle had also gone down to almost normal size. Patient greatly improved, although temperature remained elevated for some time. Attention was then directed to the great importance of the male genital tract as a source of general systemic infections, particularly acute and chronic joint involvements. The various methods of relieving the prostate and vesicles were considered, that is, the local treatment by massage, instillations, endoscopic applications, etc., and the radical operations, such as seminal vesiculotomy and seminal vesiculectomy, done with such astounding results in joint complications, by Fuller, Squier and others. The essayist then discussed the value of seminal vesicle injection by vaso puncture, and told of the many encouraging results secured by this surgical method and remarked that he believed such a minor operation should always be done before any more radical measure is attempted. Great improvements were reported in cases of recurrent discharges which were unable to be cured by local measures. He also reports two cases of sterility cured by washing out the seminal ducts which were plugged with a cheesy exudate.

### 2. MALIGNANT SYPHILIS OF UTERUS.—By

DR. GEORGE GELLHORN.

A colored girl of 17 was admitted to the City Hospital with an extensive secondary ulceration on the posterior lip of the cervix. Spirochetes were found in the secretion and the tissues of the ulcer. She left the hospital before treatment was instituted, but returned two months later markedly cachectic and with a painful contracture of the hip joint. In these two months, the ulceration of the posterior lip had grown into a large cauliflower tumor, the size of a child's fist, which, histologically, presented a clear cut picture of gumma. Wassermann was negative, obviously due to the fact that the rapidly progressing cachexia prevented the formation of antibodies in the blood. Despite vigorous antisyphilitic treatment the patient grew from bad to worse and died three weeks after admission. Autopsy revealed as the cause of death, an acute peritonitis produced by the spontaneous perforation of a large retroperitoneal abscess between uterus and sacrum. The cervical gumma was unchanged. Both parametria were diffusely infiltrated. The infiltrating process had extended into the posterior pelvic connective tissue and had attacked the anterior surface of the sacrum. Almost the entire upper half of the sacrum was necrotic, and wide openings led into the spinal canal and the acetabulum on the left side. Secondly, microbes invaded this gummatous infiltration from the necrotic surface of the cervical tumor and brought about an abscess which eventually broke in the abdominal cavity.

The entire course of the disease in this case from the initial lesion to the fatal ending, lasted less than a year, and the virulency of syphilis in this patient reminds one of the fury of the disease when it first invaded Europe. The syphilization of the world has made cases of such malignancy extremely rare, even among negroes in whom syphilis assumes more severe forms than in white patients. In regard to malignant syphilis of the uterus in particular, the above case has no counterpart in the medical literature of the world.

### 3. NEUROBLASTOMA, AN UNUSUAL TUMOR OF THE SYMPATHETIC NERVOUS SYSTEM.

—By DR. EDWIN P. LEHMAN.

This paper opened with a review of the embryology of the sympathetic system, referring the origin of neuroblastoma to the undifferentiated neuroblasts that later develop into chromaffine and ganglion cells.

The literature of the subject from Virchow down,



was briefly reviewed. Wright (1910) was the first to use the term neuroblastoma. Dalton (1885) reported the first unmistakable case. Twenty-five cases have been recorded; a table of these was thrown on the screen.

A case of neuroblastoma of the adrenal was then reported. The tumor occurred in a male of 11 months, and was removed successfully at operation by Dr. Willard Bartlett. There has been no evidence of metastasis. The tumor, which was exhibited, was the size of a grape-fruit and gave gross and microscopic appearances characteristic of neuroblastoma. The histological character, illustrated by lantern slides, suggested that the tumor is of a relatively undifferentiated type.

#### DISCUSSION

DR. E. L. OPIE: I think there can be no question but that Dr. Lehman is correct in grouping this tumor with the neuroblastoma. It is a type of tumor that, in view of its relation to the central nervous system and its malignant character, has excited a great deal of interest. Dr. Lehman has been particularly fortunate in being able to establish with certainty its relation to the adrenal, having found collections of adrenal cortical cells in the periphery of the tumor. This observation brings the tumor into relation with the peculiar embryology of the adrenal body and of the sympathetic nervous system.

DR. WILLARD BARTLETT: The tumor, as Dr. Lehman has stated, was thought to be a kidney new growth. After it was pretty well exposed no ureter was to be discovered. Then, after a little further work in the attempt to isolate the growth, there was found toward the midline, at the upper pole, a very slender pedicle containing only a few small blood vessels, and after this had been severed it was, of course, readily lifted out.

The patient, contrary to what Dr. Lehman informs me, is the usual course of these things, is still doing well after a lapse of something like five months. I will endeavor to keep track of the individual, and perhaps Dr. Lehman, at some future time, can give a complete picture of the case to its end.

#### 4. NEUROTOLOGY—INTRODUCTION—By DR. JOHN B. SHAPLEIGH.

In his introduction to the papers on Neurotology, Dr. Shapleigh mentioned briefly the steps by which the static labyrinth was found to be concerned in the production, (1) of forced movements of the head and tendency to falling in pigeons (Flourens), (2) of nystagmus from turning (Purkinje), and (3) of vertigo (Menière).

Goltz formed the first distinct theory of the function of the semicircular canals when, in 1870, he advanced the idea that they were peripheral sense-organs for informing us of the position of the head and for maintaining the body balance.

Further additions to our knowledge of the working of the semicircular canals were made by Breuer, who suggested that, while the underlying cause originating the centripetal impulses is an endolymph movement in one direction or the other, the active stimulus is a tension of the hair cells of the crista from displacement of the cupula by the endolymph current; by Ewald, whose experiments showed that the intensity of the reaction varies with the direction in which the endolymph, and therefore the cupula, moves; and by Hoegye, who found that stimulation of the vestibular of one side caused a slow movement of the eyes to the opposite side followed by a quick return, that is a nystagmus toward the stimulated side.

• The modern conception of the function of the static labyrinth and its practical application is recent and due to the work of many men, chief of whom may be mentioned Alexander, Neumann, Ruttin and, espe-

cially, Bárány in Vienna and in this country Shambaugh and Wilson in Chicago and Randall and Jones at the University of Pennsylvania.

Our present idea of the function of the static labyrinth in orientation and equilibration was then briefly outlined.

The reactions to the vestibular tests and the nervous mechanism of their production were not touched on, these being the subjects of the papers to follow.

To elicit normal reactions from these tests there is required functioning end-organs and centers and unobstructed paths for the afferent and efferent impulses. With a functioning end-organ failure to obtain the normal response must be due to some retrolabyrinthine condition preventing the proper working of the centers or nerve tracts. Though the vestibular tests will not tell what exact pathological condition may be present, yet by showing us what center or nerve tract is at fault they may aid us in determining the presence or absence of an intracranial lesion and its probable site if present, or at least give suggestive information as to its location.

The value of the method must be tested by further experience, and for this collaboration of neurologists and otologists is necessary.

The hope was expressed that by following here the plan of cooperation that has brought such important and suggestive results at the University of Pennsylvania we might aid in trying out and developing this auxilliary method of intracranial diagnosis.

#### NEUROTOLOGIC PATHWAYS.—By DR. LOUIS K. GUGGENHEIM.

The end-organ of the vestibular nerve is called the static labyrinth. This consists of the sacculus, utricle and three semicircular canals. The nerve endings are called the maculae and the cristae. After leaving the maculae and cristae the vestibular fibers are first interrupted in the vestibular ganglion in the internal auditory meatus. From here they pass to the medulla oblongata. Although not anatomically proven, there is clinical evidence of the fact that there exist two distinct pathways from the horizontal and from the vertical canals. The horizontal fibers end in the medulla in the small cell vestibular nucleus, Deiters' nucleus and the nucleus angularis. There are descending fibers to the cord and to the nucleus of the tenth. It is through the latter that stimulation of the static labyrinth causes nausea and vomiting. Collaterals from the horizontal fibers combined with fibers originating in Deiters' nucleus pass through the inferior cerebellar peduncle (corpus restiforme) to the three cerebellar nuclei globosus, emboliformis and fastigii. Through these fibers pass the stimuli from the static labyrinth which cause vertigo. From Deiters' nucleus fibers also pass through the fasciculus longitudinalis posterior to the third and sixth nuclei of opposite sides. Through this pathway the slow component of nystagmus is caused. The vertical canal fibers pass up into the pons and end in an unnamed nucleus in the upper half of this organ. From this nucleus pass fibers on the one hand to the fourth and third nuclei of opposite sides and on the other hand to the three cerebellar nuclei through the middle cerebellar peduncle. From the three cerebellar nuclei, above mentioned, the vertigo tract passes upward through the superior cerebellar peduncle to the opposite side to end in the vertigo center in the posterior portion of the second temporal convolution; some of the fibers pass upward on the same side. The vertigo tracts are interrupted in the red nuclei before they pass to the cerebral cortex. The pointing tract starts in the prerolantic centers and passes downward into the pons. Here certain of the fibers cross to the dentate nucleus of the opposite side, whence they pass to the cerebellar cortical centers.

From these centers fibers pass back to the dentate nucleus and then into the pons to extend downward and finally join the crossed pyramidal tract. The portion of the point-tract which passes to the cerebellum is called the accuracy tract.

#### A REPORT OF NEUROTOLOGICAL EXAMINATIONS IN THE BARNES HOSPITAL.—

By DR. H. W. LYMAN.

The static labyrinths are the principal organs of equilibration, and each consists primarily of three semicircular canals. Suspended in the perilymph which fills these bony canals are the corresponding membranous semicircular canals containing endolymph.

By turning a patient in a smoothly-revolving chair, or by douching the ear with hot or cold water, various movements of endolymph are caused in these canals. These stimulations cause two reactions—nystagmus and vertigo. Nystagmus is a reflex while vertigo is a subjective sensation interpreted by the cerebrum from its previous experience with similar nerve impulses and certain associated senses. A third phenomenon—past pointing—is interpreted as a cerebral mandate to the cerebellum in its effort to compensate for the sensation of vertigo.

The method of examination pursued is that which has been worked out in the Department of Otology in the University of Pennsylvania by Dr. Isaac H. Jones and his associates, and depends primarily on the fact that normal individuals give substantially the same reactions to identical stimulations of the static labyrinth, and on a utilization of what knowledge the examiner may have of the course of the vestibular nerve fibers through the brain.

One of the first cases in which the neurotological examination was made by the method above referred to suggested a lesion in the right cerebello-pontile angle. This finding was identical with the neurological and X-ray, and, on operation, a small cyst, about 2 cm. in diameter, apparently at the site of the right eighth nerve was found.

Another case presented, demonstrated that these reactions are affected very early in intracranial disturbances. A patient, early in December, gave neurotological evidence of a lesion in the left side of the pons, and in January a second neurotological examination showed that the trouble was progressing, even though at this later date no neurological localization could be made.

These tests do not supplant other methods of examination in intracranial localization, but often give information which cannot be elicited in any other way; and, for this reason, should be made in every case of suspected intracranial trouble, and in every case characterized by disturbance of equilibrium.

#### BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society met in regular session at Butler, Thursday afternoon, March 29, 1917, in the Court House. The meeting was called to order at 2:30 p. m. by the president, Dr. J. H. Fletcher. Those present were: Drs. S. W. Maxey of Johnstown, C. J. Allen of Rich Hill, William H. Allen of Maysburg, J. H. Fletcher of Spruce, E. E. Robinson and S. L. Bates of Adrian, T. F. Lockwood, E. N. Chastain, T. C. Boulware and J. S. Newlon of Butler, and Mr. A. H. Culver of Butler. The minutes of the previous meeting were read and approved.

Mr. C. H. Culver addressed the society on the subject of fumigation.

Dr. E. E. Robinson addressed the society on the importance of the use of the microscope, classifying the various diseases in which the microscope is of importance as an aid to diagnosis.

Scarlet fever in all its phases and clinical manifestations was discussed by everyone present.

Dr. E. N. Chastain, our councilor, appointed the following committee of five for Bates County for the work on Medical Preparedness: Drs. E. E. Robinson, chairman, T. C. Boulware, C. J. Allen, J. R. Martin and T. F. Lockwood.

J. S. NEWLON, M.D., Secretary.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at their rooms in St. Joseph, Wednesday evening, March 21, with twenty-four members present. Dr. F. Spencer, the president, was in the chair. The minutes of the meeting of February 21 and also the Social Session held March 7 were read and approved. This being a scientific session no business was transacted.

Dr. C. A. Good read a highly interesting paper on the "Treatment of Circulatory Failure in Acute Infections." It was discussed by the following members: Drs. J. Geiger, E. A. Miller, H. W. Carle, H. DeLameter, J. J. Bansbach, M. J. Farber, E. Kessler, W. A. Gummig and A. E. Holley; Dr. Good closing.

Dr. DeLameter addressed the meeting and expressed the desire of securing the cooperation and support of the society in his work as health officer of the city of St. Joseph.

There being no further business before the society, the meeting adjourned.

W. F. GOETZE, M.D., Secretary.

#### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society met at the Commercial Club Rooms, April 9, with the following members present: Drs. Atkins, Cunningham, Hope, Howard, Seibert, Vinyard, Wilson and Yount. Visitors: Master William E. Yount, Jr., and Attorneys R. B. Oliver, Jr., and R. L. Dearthmont.

Program for evening: How Can We Avoid Malpractice Suits, by Mr. Oliver and Mr. Dearthmont. The paper was well prepared and thorough and the attorneys were asked numerous questions which have a bearing in everyday life from the legal point of our rights. A vote of thanks was extended to the gentlemen, and we were sorry we had no larger attendance.

E. H. G. WILSON, M.D., Secretary.

#### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, Thursday, March 22, with the following officers and members present: Drs. C. S. Dodd, president; H. S. Crawford, secretary; H. A. Brierty, W. F. Chaffin, A. R. Elder, H. Jerard, R. M. Miller, M. P. Overholser and J. S. Triplett. The following were honored guests of the society: Dr. J. Franklin Welch, president, and Dr. E. J. Goodwin, secretary, of the Missouri State Medical Association, Dr. J. O. Brown of East Lynne, and Rev. George C. Monroe of Harrisonville.

Dr. Welch addressed the society on the subject, "Medical Organization: the Old and the New." Dr. Goodwin made an address on the subject of "Loyalty." Both addresses were eloquent, interesting and practical, and the speakers were enthusiastically applauded. All the members took part in a very interesting discussion of the addresses.

Dr. H. Jerard and Dr. M. P. Overholser reported very interesting cases coming under their observation recently and the members took part in discussing them.

The meeting adjourned until 7:30 p. m., and in connection with the Ministers Alliance the physicians



took part in a public meeting in the circuit court room, presided over by Dr. H. S. Crawford.

The subject of the evening was "The City Healthful." An excellent program of music was arranged and Dr. Welch delivered an address on "A Study of Hygiene and Sanitation with special reference to Medical Inspection of Our Public Schools." Dr. Goodwin made an address on "Public Health." Both addresses were well received by the audience, and were of great practical value to the public. The society and community were proud to have the pleasure of entertaining Drs. Welch and Goodwin. The audience at the evening session was most pleasantly entertained by the Coterie Orchestra, composed entirely of young ladies, and songs by Mrs. Charles Byrd and Mrs. H. H. Gsell.

This was "Community Welfare Week" and in addition to the addresses on public health other evenings were devoted to "The City Beautiful," "The City Healthful," "Boosting for Harrisonville," "Phases of Local Social Life."

H. S. CRAWFORD, M.D., Secretary.

### CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met at the Major Hotel in Liberty on February 26. The Liberty members were too busy to be out in force, but Excelsior Springs was well represented. All the absentees missed one of the best meetings in our history.

Some of our good men are going to "read themselves out of standing" if they persist in being delinquent. Some four men are getting close to the danger line (two years default), and are keeping the society off the Roll of Honor.

Dr. Howard Hill of Kansas City addressed the society on "Acute Unilateral Hematogenous Infection of the Kidney," with illustrations and specimens of infected kidneys which he had removed. A synopsis of his paper follows:

Bilateral hematogenous infection of the kidney has been known for ages. It is found in connection with acute endocarditis and with other septic processes in the body. In addition to the lesions of the kidney there are usually infarcts of the spleen and liver. Such cases have no interest from the standpoint of treatment, being always fatal.

In 1906 Dr. Brewer showed that cases occur in which the sole pathological condition is in one kidney, that it has a definite clinical syndrome and that such cases can be cured promptly by appropriate surgical treatment. A patient affected by this disease presents a picture of grave illness and yet the results of treatment by nephrectomy are very striking.

The chief reason for presenting these cases is to give the results of a study of the histories of the fourteen cases and try to establish the most important diagnostic features. They are:

1. A patient who may or may not have had a recent infection, such as tonsillitis, carbuncle, or something of that sort, is suddenly taken with a serious febrile process. The temperature in my cases has been 104, upward.

2. In the cases under consideration there has always been one or more chills, generally several.

3. Leukocyte count is in the neighborhood of 20,000. The differential count shows 80 or upward of polymorphonuclears.

4. The urine shows a trace of albumin; small amount of microscopic blood for the first three or four days; large number of pus cells and a large number of bacteria.

5. There is abdominal tenderness which, when the right kidney is involved, often leads to a diagnosis of appendicitis. On careful examination it is found that the outline of the tenderness is indistinct and

can be traced upward to the region of the gallbladder and posteriorly to the costovertebral angle.

6. The tenderness at the costovertebral angle is the characteristic physical sign. It is exquisite.

7. The general picture is similar to that of a severe case of typhoid or puerperal sepsis. It is rather difficult to get a history from the patient. The patient being indifferent to her surroundings.

There were fourteen cases of this type; eleven cases occurred in women, of which ten were on the right side. Two cases occurred in men, both on the right side. Five of the women were pregnant, varying from two to seven months duration. Two deaths occurred in pregnant women. One died without operation; all others recovered.

Twelve cases were treated by nephrectomy and one case having incision of infarcts and drainage. Of these cases when nephrectomy was done recovery was prompt, with pulse falling from 20 to 30 beats and temperature falling from 4 to 7 degrees in first six hours. Recovery of the drainage case was very slow.

Nephrectomy is indicated in the severe cases in which there are chills, high temperature and evidence of grave toxemia. In milder cases they should be treated by general measures, such as vaccines, water, urinary antiseptics. I have seen several such cases who have recovered under medical treatment. When milder cases show recurrences from time to time, nephrectomy should be done.

J. J. GAINES, M.D., Secretary.

### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in regular session on Wednesday, April 11, 1917, called to order by the president, Dr. A. J. McNees, at 2:15 p. m. The minutes of the previous meeting were read and approved. Present were Drs. A. J. McNees, J. R. Hampton, G. W. Berry, J. M. Miller, S. W. Woltzen, S. A. Poague, B. B. Barr, W. Cline, J. R. Wallis, R. J. Smith, N. I. Stebbins, J. G. Beaty and F. M. Douglass. Dr. James P. Henderson of Kansas City was an invited guest.

Dr. Woltzen reported a case of infantile paralysis in a child of tubercular parentage. Discussion by Drs. Poague and Barr. Dr. Woltzen brought up patient with edema of right forearm. Discussed by Drs. Miller, Wallis and Henderson.

Dr. J. P. Henderson gave a talk on the prostate gland; gave a history of the disease's complications and manner of treatment. It was a very instructive and interesting lesson, showing complete knowledge of the subject, and he gave a short synopsis of the operations and success of fifty cases.

F. M. DOUGLASS, M.D., Secretary.

### HOWARD COUNTY MEDICAL SOCIETY

Howard County Medical Society met with the Secretary at Fayette, Mo., April 6, 1917, at 3:00 p. m., with the president, Dr. A. B. Burgwin, in the chair. The following members responded to roll call: Drs. Burgwin, Bonham, Payne, Lee, Kitchen and Watts. The minutes of the last meeting were read and approved.

Dr. W. B. Kitchen reported cases of measles and scarlet fever, one case of the latter without desquamation.

Dr. C. H. Lee reported several cases of diphtheria in which antitoxin was used in large doses with favorable results.

As few were present, Professor Isely deferred his lecture until our meeting in May.

Dr. Lee was instructed to write Drs. Suggett and Morris of St. Louis to be present at the May meeting and give us a lecture on a subject of their own selection.

Society adjourned at 4:00 p. m. to meet May 4 at 2:00 p. m.

The members present were with President Wilson in his views of medical preparedness.

C. W. WATTS, M.D., Secretary.

#### LEWIS COUNTY MEDICAL SOCIETY

The Lewis County Medical Society met in the Court House at Monticello, Wednesday, Feb. 28, 1917. The meeting was called to order by the president, Dr. H. E. Dunlop. The following members were present: P. F. Cole, G. P. Knight, Ray Mercer, G. L. McCutchan, R. B. Schofield, S. W. Holt, P. W. Jennings, R. E. Wilson, J. C. Brown, C. O. Shanks, T. F. McGlasson and H. E. Dunlop.

Dr. S. W. Holt read a paper on "Chips from the Sailors Log," which was very interesting and instructive, giving the doctor's opinion on the venereal question according to his experience as physician under "Uncle Sam."

A very interesting discussion on organotherapy was indulged in by all present, which proved very instructive.

The bill of attorney Hilbert was allowed provided he give citations of the law on his opinion of osteopaths' right to prescribe and practice medicine as understood by the regular school of medicine.

The bill of \$1.98 for sundries was allowed.

The president appointed Drs. Cole, Brown and O'Neal on the program and asked for clinical material for next meeting. This was a good meeting and helped to bring us closer together.

Adjourned to meet at call.

R. E. WILSON, M.D., Secretary.

#### NEWTON COUNTY MEDICAL SOCIETY

The Newton County Medical Society met in the office of Dr. W. L. Weems, Neosho, April 10, 1917, with fourteen members present.

The session was taken up with reports of cases of various members of the society and attending to some business matters pertaining to the welfare of its members. The members all expressed themselves as being glad to have been present and a general good feeling prevailed.

The society adjourned to meet again in June.

HORACE BOWERS, M.D., Secretary.

### BOOK REVIEWS

ANNALS OF SURGERY, March, 1917. J. B. Lippincott, Company, Publishers, Philadelphia.

The leading article in this number is contributed by Edward M. Foote, M.D., of New York City, on "The Place of Radium in Surgery." This issue contains an unusual number of illustrations, many of them being highly interesting radiograms.

ANNALS OF SURGERY, April, 1917.

The leading article in this issue is contributed by Dr. Casper Frank Hegner of Denver, on "Lightning—Some of Its Effects." It is followed by thirteen other original articles on a variety of subjects and transactions of the Philadelphia Academy of Medicine.

SURGERY, GYNECOLOGY AND OBSTETRICS, April, 1917.

Dr. Harold Neuhof of New York contributes the leading article which is entitled "Fascia Transplantation Into Visceral Defects; an Experiment Study." It is a highly instructive study on this subject, illustrated with many photographs. There are ten other original articles and other contributions to the Department of Technique, among them a description of a spiral wire drainage tube for surgical drainage by Dr. Frank A. Glasgow of St. Louis.

THE NEW METHOD IN DIABETES. The practical treatment of diabetes as conducted at the Battle Creek Sanitarium, adapted to home use, based on the treatment of more than eleven hundred cases. By J. H. Kellogg, M.D., LL.D., Chief Medical Director of the Battle Creek Sanitarium. Price, \$2.50 net. Pp. 177. Battle Creek: Good Health Publishing Company, 1917.

The book is a résumé of modern ideas and newly established principles in the patho-physiology and treatment of diabetes. The introduction invites trained nurses as well as diabetic patients to familiarize themselves with the contents of the book.

The efficiency of a nurse is often marred by a training too technical, particularly in lines of therapy that are new and subject to further change. So too, with the individual patient it is better that knowledge of his ailment should be measured and given to him by his physician. Besides, the intricacies of an average case of diabetes with varying phases and complications are a vexing problem even to the qualified physician. What a confusion they must be to the patient who attempts to understand or interpret them is not difficult to imagine. Let the patient forget calories, acetone, and coefficients of metabolism. There are simpler guides, such as weight, sugar in urine, restricted food and exercise which he can easily comprehend.

The book is a strong plea for the sanitarium handling of diabetes, which in a short time gives both doctor and patient a valuable start. Too often this is impractical; the case must remain at home under a regime far less technical. On the whole the volume is a valuable handbook for one treating diabetics.

J. Q. C.

THE DIAGNOSIS AND TREATMENT OF ABNORMALITIES OF MYOCARDIAL FUNCTION. WITH SPECIAL REFERENCE TO THE USE OF GRAPHIC METHODS. By T. Stuart Hart, A.M., M.D., Assistant Professor of Clinical Medicine in the College of Physicians and Surgeons, Columbia University. Cloth. Price, \$4.50. Pp. 320, with 248 illustrations. New York: Rebmman Company, 1917.

This small book illustrates, better than any other work published, the newer methods of diagnosing and treating heart failure. The author shows quite clearly that the best and easiest way to diagnose heart failure is to determine the function of the heart muscle that is at fault, and, as a rule, this can be done without graphic records. The different forms of arrhythmias are fully described and each well illustrated by polygraphic tracings and electrocardiograms.

The reviewer is greatly pleased to see that the author recognizes the fact that myocardial failure is not synonymous with myocarditis, and that the presence or absence of endocardial murmurs is little, if any, aid in the diagnosis of broken compensation.

This little book contains all the modern views on heart failure, it is written in a manner that is not hard to understand, the classification is borne out by clinical investigation, and it is equally valuable to student and general practitioner.

The value of the book might be enhanced if more attention had been given to focal infection as a cause of arrhythmias, especially extrasystoles and possibly auricular fibrillation, and more emphasis laid on strophanthin as a valuable and sometimes life saving cardiac remedy. A drug that is so easy to administer and that can reduce the heart rate thirty to fifty beats in an hour deserves more than a mere mention.

The author is to be congratulated on contributing to medical literature a work of this kind, and deserves credit for an original and seemingly correct classification of the different forms of heart failure.

P. T. B.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee  
ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

JUNE, 1917

Number 6

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION } W. H. BREUER, M.D., Chairman  
COMMITTEE } S. P. CHILD, M.D.  
                  } M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### SIGNIFICANCE OF NON-SPECIFIC PROTEIN REACTION IN SPECIFIC THERAPY\*

ABRAHAM SOPHIAN, M.D.  
KANSAS CITY, MO.

Specific serum and vaccine therapy constitute one of the important advances in modern medicine. Sera and vaccine are of protein structure. It is of great practical importance to determine the cause of many of the favorable and unfavorable reactions following the injections of these protein bodies. May not some of the very favorable reactions be explained by the reaction of the system to the foreign nonspecific protein? In 1909 Vaughan, Wheeler and Gidley<sup>1</sup> called attention to the importance of protein reaction and demonstrated that any desired form of fever (acute fatal continued, intermittent or remittent) can be induced in animals by regulating the size and frequency of the doses of foreign protein administered parenterally.

My attention was first directed to the clinical importance of non-specific protein reaction in studying the infectious diseases. One of the favorable effects of the immune antimeningitis serum when injected intraspinaly in the treatment of epidemic meningitis is the production of a local leucocytosis in the cerebrospinal fluid in addition to a general leucocytosis. I<sup>2</sup> have repeatedly found that the injection of non-immune horse serum in cases of poliomyelitis and tuberculous meningitis and in other pyogenic forms of meningitis not meningococcic, causes a turbid cerebrospinal fluid showing a marked leucocytosis, proving that hyperleucocytosis, one of the very favorable and desirable reactions following the injection of the antimeningitis serum in meningococcic meningitis is to a great extent a non-specific protein reaction.

This reaction may be produced, but to a much lesser degree, by the intraspinal injection of inorganic substances, such as salt solutions and drugs.

*Reaction Following Intravenous Injection of Immune Sera.*—Intravenous injection of small doses of immune sera are usually not followed by any appreciable reaction. Larger doses of 25 c.c. or more are often followed within a few minutes by chill and a sharp rise of temperature even up to 107 degrees with the usual febrile general constitutional symptoms. Occasionally there is shock and prostration. The reaction usually subsides within a few hours, fever dropping to normal within 12 to 24 hours. The larger the dose of serum the greater the chance of reaction.

The reaction described is non-specific due to the introduction of alien protein. Some of the following observations I believe bear out this premise. About five years ago I produced an immune anti-streptococcal serum (rheumaticus) in the horse. When the serum reached a high bactericidal titre I used it therapeutically in a number of cases of articular rheumatism. The first three cases were treated in the Roosevelt Hospital, New York City. The first case was injected with 100 c.c. of serum intravenously; the later cases were injected with 50 to 75 c.c. Directly after the injection of the serum most of the cases developed chill and the general constitutional reaction previously referred to. In all a sharp hyperleucocytosis as high as thirty thousand with a relative polynucleosis up to 90 per cent. developed. The cases of rheumatism promptly recovered, the temperature dropping by crisis in 24 hours and the joint lesions promptly clearing up. Several cases treated with serum as articular rheumatism later proved to be in one case gonococcal arthritis, in another gout and in one arthritis deformans. These cases likewise developed the constitutional reaction and hyper-leucocytosis, also showing pronounced temporary improvement, but relapse occurred later.

I had similar experience with an immune

\* From Research Laboratory, German Hospital.

\* Read before the Jackson County Medical Society, April 10, 1917.

1. Vaughan, Wheeler and Gidley: Jour. A. M. A., Aug. 21, 1909.

2. Sophian: Jour. A. M. A., Aug. 5, 1916.

experimental anti-typhoid serum produced in the horse. The first case treated, a desperately sick typhoid of bad prognosis, after the injection of 75 c.c. of serum intravenously developed the same reactions previously noted, accompanied by immediate tremendous improvement and ultimate convalescence. On account of the severe immediate reaction, however, I deemed it unsafe to use the serum intravenously in large quantity.

Similar reaction of hyper-leucocytosis follows the injection of other immune sera, such as streptococic serum and meningococic serum for the respective forms of sepsis.

The intravenous injection of serum may, therefore, be of double virtue—first, due to non-specific protein reaction and second, from specific immune bodies. The non-specific reaction may occasionally cause alarming symptoms of shock for a time. The intravenous injection, therefore, of large doses of serum in acute types of sepsis where the patient is profoundly depressed, as in typhoid fever or pneumonia, should be undertaken with considerable caution.

In the forms of streptococcus sepsis of secondary origin which have grave prognosis, likewise in cases of meningitis or general gonococic sepsis, the use of adequate doses of serum is decidedly indicated, the small chance of severe depressing immediate reaction being more than counterbalanced by the immediate needs of the case.

*Reaction After Blood Transfusion.*—All who have had experience with blood transfusion have noticed, in a varying percentage of cases, severe chill and general constitutional reaction during or shortly after the transfusion. This reaction occurs when laboratory tests show the absence of demonstrable hemolysins or agglutinins, when the blood serum and corpuscles of the donor and patient are tested against each other. The clinical reaction is identical with that described after intravenous serum injection. It is accompanied by a moderate hyper-leucocytosis and relative polynucleosis. Such leucocytosis occurs even without general constitutional reaction.

The reaction following transfusion is probably of non-specific protein nature. The favorable response after blood transfusion especially in treatment of infectious disease may in part be explained by non-specific protein reaction.

*Auto-serum Therapy.*—Attention has been directed to the favorable results following the use of auto-serum therapy in skin diseases and asthma. I have seen some equally good results in infectious diseases so treated; in lagrippe, gonorrheal rheumatism, pneumonia, acute arti-

cular rheumatism. A satisfactory explanation for the action of auto-serum therapy has not been advanced. Some change in the protein molecule very probable occurs on the removal of blood from the body. On reinjection it is probable that the serum acts as a foreign protein causing both non-specific reaction and also a specific response of the body against those proteins containing the toxic or infectious agent. A slight leucocytosis with polynucleosis depending upon the amount of serum injected can usually be demonstrated.

*Intravenous Injection of Sensitized Vaccine.*—Gay and Chickering's<sup>3</sup> report on the striking results obtained following the use of sensitized typhoid vaccine used intravenously in the treatment of typhoid fever is noteworthy. They noted after the injections a series of symptoms characterized particularly by a chill, rise and fall of temperature and leucopenia followed by hyper-leucocytosis. They state that they believe the sensitized vaccine injected intravenously produces a specific form of hyper-leucocytosis of maximum degree, more so than follows the use of non-specific proteins, as coli vaccine, *B. pyocyaneus* and deuterio-albumose, used by other workers. In addition to a non-specific reaction they believe there is probably a high specific response. McWilliams<sup>4</sup> in an article entitled "Is the Hyper-leucocytosis Following the Injection of Typhoid Bacilli into Immunized Rabbits Specific?" shows that the reaction is non-specific; that normal and typhoid immune rabbits responded equally well to the intravenous injection of typhoid bacilli; that immune typhoid rabbits showed the same degree of hyper-leucocytosis when injected with *B. typhosus*. The same was true of rabbits immunized against *B. coli*.

Miller and Lusk<sup>5</sup> reported that almost equally good results were obtained in the treatment of typhoid fever by the injection of one or two c.c. of a four per cent. solution of proteose as were obtained by the intravenous injection of typhoid vaccine. Very satisfactory results were also obtained in the treatment of arthritis by the intravenous injection of proteose and typhoid vaccine.

Numerous observers have used anti-meningitis serum by subcutaneous injection as curative treatment for gonococic arthritis with very good results. Other observers have used sterile milk in the same way with equally good results. Davis more recently also calls attention to the favorable results produced by non-specific vaccine and other protein injection in

3. Gay and Chickering: Jour. A. M. A., 1916, lxvi, No. 20 and No. 25.

4. McWilliams: Jour. A. M. A., April 2, 1916.

5. Miller and Lusk: Jour. A. M. A., June 3, 1916.

6. Davis: Journal A. M. A., Jan. 20, 1917.



the treatment of arthritis. Jobling and Petersen<sup>7</sup> explain the reactions following the intravenous injection of bacteria, kaolin, protein split products and trypsin in experimental animals as being due to mobilization of serum protease and usually of lipase. A similar reaction occurred in the patient following the injection of vaccines and proteose but not to the same degree nor with the same regularity as in ani-

favorable reaction may be explained as due to the non-specific protein reaction with resulting favorable response as would probably occur after the use of other protein material used in similar quantities.

*Swift and Ellis Salvarsanized Auto-serum Treatment.* In previous pages has been discussed the local and general leucocytosis following the injection of serum, immune or non-immune, into the subarachnoid space. The favorable results after the injection of salvarsanized serum I believe are in part due to the reaction following the introduction of the protein into the subarachnoid space. Most of the reaction no doubt is due to other causes, namely, the introduction of immune bodies present in the blood serum into the subarachnoid space and to some extent the minute quantity of salvarsan.

*Reaction After Intravenous Injection of Salvarsan.*—The most probable explanation advanced for febrile reaction and general constitutional symptoms following the intravenous injection of salvarsan has been the presence of the dead bodies of bacteria in the distilled water. For this reason it has been advised that fresh distilled and better, double distiller water be used. It is noteworthy that this reaction is very uncommon after the injection of concentrated solutions of neosalvarsan. This is another instance of non-specific protein reaction. The symptoms of vomiting, abdominal pain, convulsions and collapse following the injection of salvarsan undoubtedly has other additional cause.

mals. These injections are followed they say not by an increase but a decrease of anti-ferment for a short period of time, later followed by a rise; the decrease being explained as possibly due to the chill which occurs after the injections; the increased metabolic demands of the organism being met in part by the rapid utilization of the serum lipoids.

At this time we can recall the "Friedman Tubercle Vaccine" for which much was claimed. Friedman injected material intravenously. It is probable that any favorable results that may have occurred were due to the non-specific reaction.

*Leucocyte Extract.*—Favorable results have been noted by Hiss and Zinsser<sup>8</sup> both by experimental observation in the treatment of rabbits against different cultures of bacteria and also in the clinical use of this material in the treatment of infectious disease, notably erysipelas and pneumonia. These observations were confirmed by some observers and disproved by others. Williams and Youland<sup>9</sup> show that this material was of little value in the treatment of pneumonia. I have seen undoubted temporary improvement after the use of the material in infectious disease, but do not believe the claims made for it by Hiss and Zinsser have been borne out. Leucocytosis is noted after the injection of leucocyte extract. I believe the

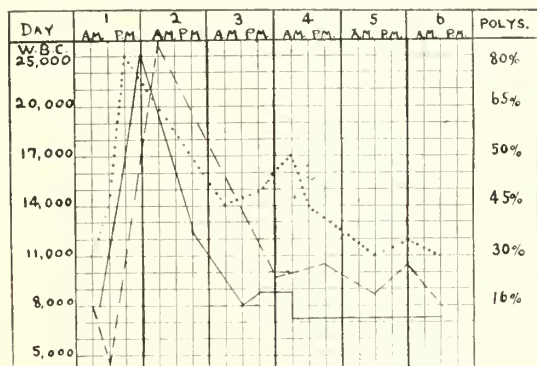


Chart 1.—Broken line, polynuclear leucocytes. Unbroken line, W. B. C. Dotted line, temperature.

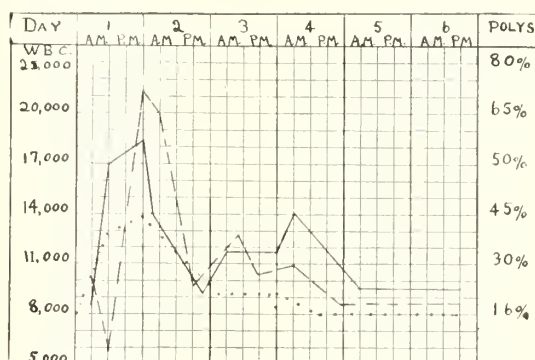


Chart 2.—Unbroken line, temperature. Broken line, W. B. C. Dotted line, polynuclear leucocytes.

### Experimental Observations on Non-Specific Protein Reaction

*Experiment No. 1.*—The effect of intravenous injection of different proteins into rabbits.

(A). Effect of normal human serum intravenously injected. A two-pound rabbit was injected intravenously with 6 c.c. of fresh normal human serum.

7. Jobling and Petersen: Jour. A. M. A., June 3, 1916.

8. Hiss and Zinsser: Jour. Med. Research, xix and xx, 1908 and 1909.

9. Williams and Youland: Jour. Med. Research, xxi, 1914.

Two other rabbits were injected intravenously with respectively 10 and 15 c.c. of the same human serum. The reaction, febrile and hyper-leucocytosis, was more pronounced, fever higher and leucocytosis higher and during the first four hours there was more marked depression and leucopenia. The general curve, however, was exactly the same as that depicted in Table 1.

(B). The effect of milk intravenous injection. Six c.c. of sterile milk was injected intravenously in a rabbit of two pounds.

(C). The effect of intravenous injection of egg white. Four c.c. of a dilution of  $\frac{1}{2}$  c.c. of egg white in 20 c.c. of distilled water injected intravenously in a rabbit of two pounds.

*Discussion of Results.*—The intravenous injection of foreign protein into rabbits produces a non-specific protein reaction consisting of fever and leucocytic change. The febrile

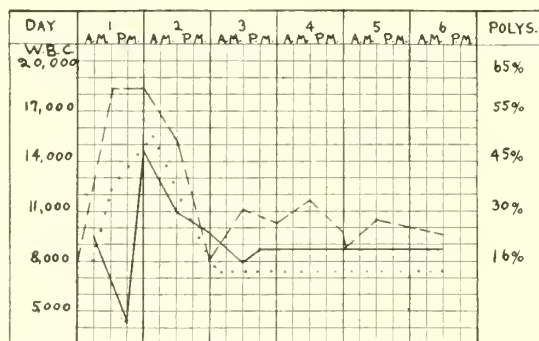


Chart 3.—Broken line, temperature. Unbroken line, leucocytes (W. B. C.). Dotted line, polynuclear leucocytes.

change begins in from two to four hours after the injection and lasts a varying length of time depending on the quantity of protein injected.

During the first few hours after the injection there is a period of leucopenia with moderate polynucleosis. This change like the constitutional reaction of general depression varies with the quantity of protein injected. The early polynucleosis, even in the stage of leucopenia suggests that polynucleosis as a protective phenomenon occurs even before leucocytosis.

Two animals developed convulsions immediately after the intravenous injection. This was probably due to the simple introduction of a foreign body into the circulation.

*Experiment No. 2.*—Effect of reinjection of the same protein into sensitized animals.

Three rabbits sensitized by intravenous injection of normal human serum 12 days previously were reinjected with normal human serum with quantity equal to the first dose.

Practically the same febrile and leucocytic reaction developed as after the first injection.

*Experiment No. 3.*—Observations to determine the protective properties of the non-specific protein reaction.

A series of animals were injected with normal human serum 10 c.c. intravenously and four hours later were injected intravenously, two respectively with live staphylococcus aureus and two with streptococcus pyogenes. Several times the lethal dose of culture was used. At the time of the injection there was a sharp febrile reaction with a leucopenia in all ranging from 3 to 5,000 leucocytes. There was an average increase of about 8 per cent. in the polynuclear leucocytes.

One of the staphylococcus rabbits died in twenty-four hours; the other died in three days. The control staphylococcus animal died in seven days.

One of the streptococcus rabbits died in a few minutes after the injection; the other died in six days. The control streptococcus animal was very sick but lived.

*Discussion of Results.*—Animals injected during the stage of leucopenia following the injection of foreign protein were not protected against lethal doses of culture. If anything death occurs sooner than in the controls, probably due to the injection of the culture while the animal is in the stage of depression from the injected protein.

There was no protection, however, even when animals were injected twelve hours after the protein injection at a stage when there was marked leucocytosis, polynucleosis and sharp febrile reaction. The point was not of sufficient moment to warrant the sacrificing of more animals but it is very probable that animals injected with minimal lethal doses of culture during the stage of highest leucocytosis and polynucleosis following foreign protein reaction would be protected to some extent.

#### CONCLUSIONS

1. Foreign protein injected intravenously into animals produces a febrile reaction and hyper-leucocytosis, the reactions varying according to the quantity of protein injected. After large injections there may occur a period of depression with leucopenia corresponding to the so-called negative stage.

2. Therapeutic sera and vaccines injected intravenously produce a sharp non-specific protein reaction with hyper-leucocytosis. This reaction is usually of undoubted therapeutic value and might possibly explain good results reported after the use of such products sometimes improperly used, other times when the product itself is of doubtful specific value.

510 Commerce Building.



**BLOOD CHEMICAL METHODS IN DIAGNOSIS AND PROGNOSIS\***

R. B. H. GRADWOHL, M.D.  
ST. LOUIS

A discussion of the problems connected with the newer methods of blood analysis for the detection of derangements in kidney function would be incomplete without paying some attention to the subject of urine analysis—methods of examination which have been in vogue for quite some time and the importance of which we do not in any way wish to decry or minimize. A brief historical review of these methods in medicine is therefore not amiss. Gross changes in the appearance of the urine were noted by the earliest of medical writers, namely, Hippocrates. He taught that there were prognostic aspects to the examination of urine. He showed that there was probably some pathological change in kidneys when there was a change in the physical properties of urine: its quantity, color and clearness, its cloudy or turbid appearance and the differences in the gross appearance of its sediments. He tried to show that there was a definite influence of food and drink upon the urine. Others after Hippocrates alluded to the same characteristics but added nothing new. It was Galen who systematized these Hippocratic teachings, but century after century passed without a single addition to this information. Then came Avicenna, the Arabian physician, 980-1037, who showed that external influences, such as fasting vigils, physical and mental exertions, influenced the condition of the urine. He showed that internal administration of certain drugs could color the urine. During the Middle Ages, Johannes, called Actuarius, living at the court of Byzantium in the thirteenth century, added his own observations to those of the Hippocratic-Galen period, describing the minute physiological characteristics of urine. No chemical data of course were at hand and therefore no real progress could be made until the development of chemistry occurred: this came with the work of Lorenzo Bellini of Florence. He evaporated urine and noted that when he added water, the solids dissolved, returning step by step through various intensities of taste and color until the original condition almost ensued. He therefore concluded that the different colors and tastes of urine were due to variations in concentrations of the solid ingredients. Later Dobson and Willis discovered sugar in urine; Brandt found phosphorus which Markgraff proved came from the phosphates. Rouelle discovered urea in 1773 and found calcium carbonate as well as hippuric acid in the urine of herbivora. In 1770 Cotugno found albumin in

urine; in 1798 Cruikshank noted the connection of this albuminuria to dropsy, but it remained for Richard Bright, physician and pathologist to Guy's Hospital, to show the true relations of dropsy and albumin to disease of the kidneys. Bright's *Reports of Medical Cases*, published in 1827, presents a striking contrast to the vague humoralism of his predecessors, the work showing the solidism of his pathology. He ascribed albuminuria and dropsy to the altered anatomical condition of the kidneys and he figured the changes in the kidneys much as they are described and recognized today. About this time, the chemical analysis of gravel and calculi were undertaken, the principal writers on this subject at that time being Wollaston, Scheele, Wetzlar and Prout. The work of Rayer and Becquerel was epoch-making in that it covered not only the chemistry but also the microscopy of urinary sediment. Casts were first described by Vogla in 1837. Nasse and Simon amplified this description. It was Henle, however, who, in 1844, insisted most particularly upon their significance in renal disease. Later chemical and microscopical researches have given us the present technic of urine examinations, which are familiar to all of us. We must not forget to allude to the historical aspect of the search for sugar in urine and blood, as this subject intimately concerns us in the present paper. While diabetes was known to the ancients, Celsus, Aretaeus, Galen and Paracelsus, they gave no intimation that they suspected it was characterized by the presence of sugar in the urine. Ayur Vedda in 500 A. D. claimed that this was known to Hindu physicians, but no European knew it until Dobson demonstrated it in the eighteenth century. The first demonstration of sugar in the blood was made by Ambrosian in 1835. The remarkable work of Claude Bernard in 1848 opened up a path of investigation on the elaboration of carbohydrate metabolism that fully explains glycemia as we know it today.

The question of studying the intimate metabolism of the body by means of chemical tests of blood was before the minds of many investigators abroad for some years. It remained, however, for American research workers to develop methods which because of the fact that but small quantities of blood were required and because these tests could be rapidly carried out, have resulted in the development of some surprisingly useful facts of great value to clinicians. The names of Folin, Denis, Benedict, Myers and Fine represent the group of men who since 1912 have given us the principal points in the technic now in use. Our interest in this new-born department of chemical hematology is based upon a close study of these methods, from a technical and from an interpretative clinical standpoint. A consideration

\* Read before the St. Louis Medical Society, March 31, 1917.

of some facts of normal metabolism is necessary in order to thoroughly understand exactly what we are seeking here to depict. These blood chemical methods entail a search in blood mainly for the products of non-protein nitrogenous metabolism, to wit, urea nitrogen, uric acid, creatinin, and sugar. We will not take up other products, the interpretation of which is still under investigation. As a result of these tests we have established certain quantitative normals; these are, in terms of one hundred cubic centimeters of blood, uric acid 1-3 mg., urea nitrogen, 12-15 mg., creatinin 1-2.5 mg. and sugar 0.08-0.12 per cent. It has been shown that the substance which is easiest of all for the kidneys to throw out is creatinin, then comes urea nitrogen and finally uric acid. Uric acid is the most difficult, creatinin the easiest to eliminate. Therefore the first change in the concentration of these ingredients in the blood when the kidney function is disturbed, is a retention of uric acid. As the change in kidney

At this point I wish to call attention to the concentration of creatinin as first noted by Folin and later confirmed by Myers and Lough with respect to prognosis. Knowing that creatinin is the easiest ingredient of these three to be eliminated by the kidneys, its retention in undue quantity is suggestive of most critical derangement of kidney function. The normal figure in blood is from 1 to 2.5 mg. per 100 c.c. of blood. When creatinin is stored up in the quantity of 5 mg. or over, we can safely make a fatal prognosis regardless of the apparent good condition of the patient. In an extended experience with severe nephritics we have never seen an exception to this finding, nor has the writer seen any statement in the literature contradicting this. In a study of thermic fever cases with Dr. Schisler last summer, this prognostic factor came out in a striking manner in some of these cases. In recent experiences at the City Hospital, this prognostic factor has asserted itself correctly time and again.

TABLE 1.—THE CHARACTERISTIC BLOOD PICTURES IN GOUT, DIABETES AND NEPHRITIS

Disease	Total Solids	Total Nitrogen	Nonprotein Nitrogen	Urea Nitrogen	Uric Acid	Creatinin	Creatinin	Sugar	Chlorides as NaCl	Cholesterol
	Per Cent.		Mg. per 100 C.c. Blood					Per Cent.		
Normal.....	20.0	3.00	25-50	12-15	1-3	1-2.5	5-10	0.08-0.12	0.65	0.15
Gout.....	.....	.....	.....	.....	3.5-6	.....	.....	.....	.....	.....
Mild diabetes.....	.....	.....	.....	.....	.....	.....	.....	0.15-0.30	.....	.....
Severe diabetes.....	17-20	1.8-2.9	.....	.....	.....	.....	.....	0.30-1.10	0.57-0.61	0.15-0.30
Chronic nephritis.....	13-19	.....	30-80	15-50	1-4	1-3	.....	.....	0.54-0.75	0.17-0.35
Uremic nephritis.....	12-18	1.7-2.7	120-350	80-300	4-15	4-34	5-31	0.10-0.20	0.48-0.64	0.17-0.35

This shows the characteristic blood pictures in gout, diabetes and nephritis. It shows the normal ingredients first.

function is aggravated, we next have a retention of urea nitrogen; we finally see creatinin stored up. This occurs manifestly only in extreme states of kidney derangement. The storing up of these ingredients in this manner is called by Myers and Chace the "stair-case" effect and indeed this expression most graphically describes it. We see in practical work in the very beginning of chronic interstitial nephritis an increase in uric acid alone. There may or may not be alterations in the urine, perhaps none, perhaps only a trace of albumin and an occasional cast. In next order, the urea nitrogen is increased and here again there may be little or no change in the urine. Creatinin finally is blocked and still we may have no increase in the pathologically formed substances in urine. It is in the interstitial type of nephritis that we see the most interesting blood picture. We may have in the so-called parenchymatous type an increase of all these ingredients only in severe states, not step by step as we see it in the interstitial variety. It is in that state known as uremic nephritis that we see the highest concentrations of all these ingredients.

Another line of investigation which blood chemistry has opened up is the correct method of differentiating gouty from other arthritic conditions by means of an estimation of uric acid. Many years ago, Garrod stated that uric acid is markedly increased in the blood in gout but not in rheumatism; his views not being in accord with existing authority, were disputed at the time. Strange as it may seem, this discerning clinical observer reasoned correctly even though he had no clinical methods to mathematically prove his point. In gouty conditions we have figures of uric acid over 3.5 mg., at times as high as 25 mg. In rheumatism we have no accumulation of uric acid in blood. Blood chemistry plays an important part in the differential diagnosis between cases that are purely renal in origin and secondarily only cardio-vascular, and those that are purely cardio-vascular and only secondarily renal. We believe that the experiences which we have had in association with Drs. Schisler and Powell at the City Hospital have very often clearly made this distinction where other methods have failed to do so. We refer of course to the extreme cases of both kinds, cases that are in a condition commonly called uremic, with



albumin and casts in the urine in both cases, with increased blood pressure and often with severe cardiac symptoms. In these cases we find that there is a marked accumulation of all these non-protein nitrogenous ingredients in the first type of case, namely the primary renal; in the second group of cases there is no such accumulation or very little. In the purely nephritic type of advanced variety, we have found all ingredients increased, with creatinin above the fatal point. In a recent experience we saw

TABLE 2. PATIENT H.

Date	Blood			Urine		
	Sugar, per Cent.	CO <sub>2</sub> Combin- ing Power (C.e. per 100 C.c. Plasma)	Sugar	Acetone	Diabetic Acid	
7/10/16	0.330	68				
7/14/16	.....	.....	5% or 96 gm. in 24 hr. spec.	Trace	Trace	
7/25/16	0.315	85	2.9% or 78 gm. in 24 hr. spec.	Neg.	Neg.	
8/16/16	0.216	.....	Neg.	Small amount	Small amount	
9/19/16	0.165	53	Neg.	Large amount	Large amount	

This shows an interesting fact concerning hyperglycemia, namely, that the threshold point for the passage of sugar into urine may be over 0.17 per cent. of blood sugar. Here is a case with 0.216 per cent. blood sugar with no glycosuria. This patient was under starvation at the time this observation was made.

two cases, both apparently in an uremic status. One had urea nitrogen 99, uric acid 9.8, creatinin 6.76, sugar 0.144 per cent., manifestly a case of uremic nephritis; the other showed urea nitrogen 25, uric acid 5.7, creatinin 1.62, 0.114 per cent. sugar, manifestly not a uremic. Both cases clinically were alike. The first case died the following day; the second case died some time later of heart block. This differentiation should be helpful in treatment.

The importance of blood chemistry is manifest in a study of diabetes mellitus. We know that the normal amount of sugar in blood is 0.08 to 0.12 per cent. Any figure above this is called hyperglycemic. It is stated by Hamman and Hirschman and others that sugar may rise in the blood to the point 0.18 per cent. before it appears in the urine; it may appear in the urine of course below this point. The threshold point is ordinarily 0.18 per cent. yet we have several instances where there was a concentration of 0.22 per cent. before glycosuria occurred. The importance of a knowledge of the amount of blood sugar present in any given case is readily seen, first for purposes of diagnosis, secondly for guidance during the treatment of diabetes mellitus. It is also important in clearing up the differential diagnosis between renal diabetes and diabetes mellitus. We know that in renal diabetes there is no increase in blood sugar; in diabetes mellitus there is always hyperglycemia. We mention this differentiation, fully aware, however, that some authorities maintain that renal diabetes is simply a fore-

runner of diabetes mellitus and is not in itself a clinical entity. Allen, Mosenthal and others believe that there are well authenticated cases of renal diabetes on record that are *not* prior cases of diabetes mellitus.

Another line of investigation opened up by blood chemistry is the estimation of acidosis. For an estimation of this kind we have the Van Slyke method of determination of the carbon dioxid power of absorption of blood plasma. We also have Marriott's method for the determination of acidosis by means of the hydrogen-ion concentration of the blood, as well as the method of Marriott for the determination of the alkali reserve of the blood plasma. Another method is the determination of the carbon dioxid in alveolar air according to Fredericia's technic. These are methods that are commonly used in the detection of acidosis in connection with diabetic states. Very recently Marriott, Haessler and Howland have called attention to a method of determination of acidosis that occurs with the nephritic state. They claim that the acidosis met with in nephritis is unlike that of diabetes, namely an accumulation of acetone bodies; rather is it due to a failure to regulate the formation of acid substances by the kidneys, a failure to eliminate acid phosphates. Their method looks to the estimation of the inorganic phosphates in the blood. The normal figure expressed in terms of phosphorus varied

TABLE 3. CASE OF MRS. "R," AGE 23

Date	Weight, 1916	Diet	Blood Sugar, %	Urine Analysis		
				Vol.	Sp. Gr.	Sugar
9/19	117	Regular mixed		2,600	1.037	3% or 78 gm.
9/20	114	Regular mixed	0.36	3,100	1.047	4% or 126.4 gm.
9/21	116.5	Regular mixed		2,600	1.040	4% or 104 gm.
9/22	116	Regular mixed		3,000	1.042	5% or 150 gm.
9/23	117.25	Regular mixed		3,200	1.040	5% or 160 gm.
9/24	.....	Regular mixed		3,500	1.042	5% or 175 gm.
9/25	120	Regular mixed		3,650	1.040	6% or 240.9 gm.
9/26	119	Fat free	0.36	2,200	1.040	5% or 110 gm.
9/27	118	Starvation		650	1.020	Negative
9/28	117.5	Starvation		800	1.022	Negative
9/29	118	54 calories	0.120	950	1.027	Negative
9/30	116.5	234 calories		1,200	1.024	Negative
10/ 1	116	354 calories		720	1.026	Negative
10/ 2	117	504 calories		700	1.026	Negative
10/ 3	119	631 calories	0.120	850	1.026	Negative

This illustrates a partial record of a case of severe diabetes in a young subject under the Allen treatment. Note that the urine which held 5 per cent. sugar before treatment, with blood sugar 0.36 per cent., became free of urine sugar in twenty-four hours and became normal, so far as blood sugar was concerned 0.12 per cent., on the third day, when the patient was taking 54 calories food. This record showed (not shown here) on the fifteenth day that the patient was taking 2,000 calories, with normal blood sugar and no glycosuria.

from 1 to 3.5 mg. per 100 c.c. of blood. In nephritic acidosis, they found it increased invariably to many times the normal, as much as 23 mg.

Something might be said as to the technic of blood chemical analyses. The sample is procured preferably in the morning before the patient has eaten his breakfast. Blood is taken in much the same manner that we take it for a serological test, namely, by puncture of a palpable or visible vein on the forearm, made to

stand out by means of a tourniquet and by having the patient clench his fist. The blood is received into a bottle prepared by means of adding and drying in the bottle over-night 10 drops of potassium oxalate 20 per cent. solution. The bottle is agitated to assist in defibrination and examined as soon as possible. The examination begins with an estimation of sugar; we use the method of Lewis and Benedict. We next examine for creatinin, according to Folin and Denis' method. Next uric acid, according to Folin and Denis, and finally urea nitrogen according to Marshall's urease method. We may, if desired, look for the amount of non-

give us reliable information. We have found it normal where the kidneys were deficient; we have found it showing a decreased elimination where the kidneys were proven by blood chemical methods to be functionally normal, and where later operative procedures and perfect convalescence bore out these facts. In a recent study which was presented by Dr. Scherck and myself before the American Urological Association this week, these facts have been clearly proven in a series of about twenty-five cases, mainly obstructive conditions in the urogenital tract. In this connection we cannot conclude without calling the attention of the surgi-

TABLE 4.

Chart showing the blood and urinary findings in a series of cases studied by the writer and Dr. E. Schisler at the City Hospital. The prognostic value of the finding of 5.0 mg. of creatinin was well illustrated in these cases. (From Gradwohl and Blaivas: Text Book on Blood and Urine Chemistry.)

Case	Date, 1916	Out-come	Mg. per 100 C.c.			Sugar, per Cent.	Remarks	Albu-min	Su-gar	Ace-tone	Dia-cetic Acid	Indi-can	Microscopic Examination	Remarks
			Urea Nitro-gen	Uric Acid	Creat-inin									
O.†	8/ 1	Died	33	1.32	4.80	0.150	Retention high; patient died same day	++	Neg.	Neg.	Neg.	++++	Moderate No. of coarsely granular casts and red blood cells; occasional leukocytes	Findings serious
F.	8/ 2	Died	32	8.6	4.1	0.102	High retention indicating probable fatal outcome; patient died two days after creatinin reached 5 mg. per 100 c.c.	++++	Neg.	++	++	++	Moderate No. of granular casts and ep. cells	Urinary findings indicated some marked renal disturbance, but not of same importance as blood findings. Remarkable No. casts on last day of life
	8/ 3		39	9.8	4.66	0.165								
	8/ 4		39	7.9	4.47	0.180								
	8/ 8		45	7.1	3.94	0.156		Neg.	Neg.	Neg.	Neg.	Trace	Moderate No. of epithelial cells, leukocytes and finely gran. casts	
	8/ 8½		44	0.88	2.4	0.100							Very many gran. casts and occas. leukocytes; such number of casts is rarely seen	
	8/10		55	6.9	5.0	0.174		Neg.	Neg.	Neg.	Neg.	++++		
H.	8/ 2	Recov-ered	26	9.6	3.83	0.168	Retention not high; patient recovered although clinical signs seemed bad	++	Neg.	+	+	++	Moderate number of coarsely and finely granular casts and occasional leukocytes	Very occasional leukocytes
	8/12		14	3.3	2.0	0.120		Neg.	Neg.	Neg.	Neg.	Neg.		
S.	8/ 3	Died	76	14.8	6.1	0.177	Clinical signs good; retention high, attracting attention to fatal prognosis; died 1 day later	Very faint trace	Neg.	Neg.	Neg.	++	Moderate number of epithelial cells and leukocytes; very occasional red blood cells; two finely granular casts found after a prolonged search	
M.	8/ 4	Recov-ered	19	3.3	3.0	0.138	Observation made when convalescent							

\* -+++ very large amount; ++ moderate amount; + small amount.  
† Specific gravity of urine 1.015. ‡ Spinal fluid.

protein nitrogen, cholesterol and total solids. This makes a complete blood chemical analysis. The acidosis tests are only carried out when indicated by fear of that complication arising. The methods are mainly colorimetric.

Before closing we wish to say a word or two respecting the value of the phthalein test of Geraghty and Rowntree as compared to blood chemical tests. Like others we have been very much dissatisfied with this test, first because its principle does not necessarily reside in an estimation of true kidney function, secondly because it has repeatedly failed in practice to

cal profession to the necessity of utilizing blood chemical methods in surveying operative risk. We believe from practical experiences, that the methods of urine analysis, no matter how complete, fail to fully apprise the surgeon of the functional capacity of his patient to stand the anesthetic and the usual operative disturbances so familiar to all. We believe that the wide experiences of clinicians with these methods have already proven their usefulness to the internist; the surgeon, too, will find them of extreme usefulness in indicated cases.

928 North Grand Avenue.



## REFERENCES

- Autenrieth and Funk: München, med. Wehnschr., 1913, ix, p. 1243.  
 Allen: Glycosuria and Diabetes, Boston, 1913.  
 Ambard: Physiologie normale et pathologique des reins, Paris, 1914.  
 Addis and Watanabe: Jour. Biol. Chem., 1916, xxiv, p. 203.  
 Bloor: Jour. Biol. Chem., 1915, xxiii, p. 317; *Ibid.*, 1916, xxiv, p. 227.  
 Boothby and Peabody: Arch. Int. Med., 1914, p. 497.  
 Bernard, Claude: De l'origine du sucre dans l'économie animale, Paris, 1848; also Leçons sur le diabète et la glycogénese animale, J. B. Baillière et fils, 1877, p. 576.  
 Chace and Myers: Jour. A. M. A., 1916, lxvii, p. 932.  
 Cooke, Rodenbaugh and Whipple: Jour. Exper. Med., June, 1916, xxiii, No. 6, p. 717.  
 Folin: Jour. Biol. Chem., 1915, xxii, p. 327.  
 Folin and Denis: Jour. Biol. Chem., 1913, xiv, p. 29; *Ibid.*, 1914, xvii, p. 487.  
 Folin, Karsner and Denis: Jour. Exper. Med., 1912, xvi, p. 789.  
 Frothingham, Fitz, Folin and Denis: Arch. Int. Med., 1913, 12, p. 245.  
 Frothingham and Smillie: Arch. Int. Med., 1914, xiv, p. 541.  
 Folin: Jour. Biol. Chem., 1914, xvii, p. 475.  
 Fine and Chace: Jour. Pharm. and Exper. Therap., 1914, vi, p. 219.  
 Folin and Denis: Arch. Int. Med., 1915, xvi, p. 33; Jour. Biol. Chem., 1912, xiii, p. 469; *Ibid.*, 1913, xiv, pp. 29 and 95.  
 Folin and Macallum: Jour. Biol. Chem., 1912, xiii, p. 363.  
 Folin and Denis: Jour. Biol. Chem., 1916, xxvi, p. 505; *Ibid.*, 1912, xi, p. 527.  
 Folin and Denis: Jour. Biol. Chem., 1916, xxvi, p. 473.  
 Folin and Farmer: Jour. Biol. Chem., 1912, xi, p. 493.  
 Fine: Jour. A. M. A., 1916, lxvi, No. 26.  
 Dakin and Dudley: Jour. Biol. Chem., 1914, xvii, p. 275.  
 Gradwohl, R. B. H.: Philadelphia Med. Jour., April 22, 1899.  
 Gradwohl and Blaivas: The Newer Methods of Blood and Urine Chemistry, C. V. Mosby Co., 1917.  
 Garrod, A. B.: Med. Clin., 1848, xxxi, p. 83; and Treatise on Gout and Rheumatic Gout, 1876.  
 Howland and Marriott: Bull. Johns Hopkins Hosp., 1916, xxviii, p. 63.  
 Howland and Marriott: Am. Jour. Dis. Child., May, 1916.  
 Hammann and Hirschmann: Joslin (quoted), Diabetes Mellitus, 1916, p. 74.  
 Howland, Haessler and Marriott: The Use of a New Reagent for Microcolorimetric Analysis as Applied to the Determination of Calcium and of Inorganic Phosphates in the Blood Serum, Jour. Biol. Chem., March 1916, proc. xviii, xxiv, No. 3.  
 Janney, N. W.: Arch. Int. Med., Nov. 15, 1916, xviii, No. 5, p. 584.  
 Janney, N. W.: Jour. Biol. Chem., 1915, xx, p. 321.  
 Levy and Rowntree: Arch. Int. Med., 1916, xvii, p. 525.  
 Myers and Bailly: Jour. Biol. Chem., 1916, xxiv, p. 147.  
 Myers and Fine: Jour. Biol. Chem., 1915, xx.  
 Myers and Fine: Essentials of Pathological Chemistry.  
 Myers and Lough: Arch. Int. Med., 1915, xvi, p. 536.  
 Marshall: Jour. Biol. Chem., 1913, xiv, p. 283; *Ibid.*, 1913, xv, pp. 287 and 495.  
 Myers and Gorham: Post-Graduate Med. Jour., 1914, xxix, p. 938.  
 Myers and Fine: Post-Graduate, 1914-15: reprinted as "Chemical Composition of the Blood in Health and Disease," New York, 1915.  
 Marriott: Arch. Int. Med., 1916, xvii, p. 840; Jour. A. M. A., 1916, lxvi, p. 1594.  
 Von Mering and Minkowski: Arch. f. d. ges. Physiol., 1904, cvi, p. 160.  
 Marriott: Jour. A. M. A., May 20, 1916.  
 Mosenthal and Lewis: Jour. A. M. A., Sept. 23, 1916, lxvii, No. 113, p. 933.  
 McLean and Selling: Jour. Biol. Chem., 1914, xix, p. 31.  
 von Noorden: Die Zuckerkrankheit, Berlin, 1912.  
 Plesch: Ztschr. f. exper. Path. u. Therap., 1909, vi, p. 380.  
 Pratt: Tr. Am. Assn. Physicians, 1913, xxviii, p. 387.  
 Pratt: Am. Jour. Med. Sc., 1916, cli, No. 1, p. 92.  
 Shaffer: Jour. Biol. Chem., 1910, vii, pp. 23, 30.  
 Tileston and Comfort: Arch. Int. Med., 1914, xiv, p. 620.  
 Van Slyke and Cullen: Jour. Am. Med. Assn., 1914, lxii, p. 1558; Jour. Biol. Chem., 1914, xix, p. 211; *Ibid.*, 1916, xxiv, p. 117.  
 Van Slyke: Unpublished Data.  
 Weston and Kent: Jour. Med. Research, 1912, xxvi, p. 531.

# THE ROENTGEN RAYS AS A DIAGNOSTIC AID IN GASTRO-INTESTINAL COMPLICATIONS; WITH LANTERN SLIDE ILLUSTRATIONS\*

E. H. KESSLER, A.M., M.D.  
ST. LOUIS

Roentgenology has made such rapid strides in the past few years that today it is a common occurrence for the roentgenologist to be asked by both the internist and the surgeon just what can be shown by the help of the Roentgen rays.

The true answer to such a question today may be wide of the mark tomorrow. Improvement of transformers, tubes and technic may make our answer of today seem trivial tomorrow.

Aside from any special fitness necessary in the observer, a willingness for hard work is essential in the roentgenologist in gastro-intestinal work.

To go to the hospital at about seven o'clock in the morning—I say hospital because gastro-intestinal work cannot be properly done elsewhere—give the patient his test meal, make his observations, record his history and findings and observe that patient at various times until the tenth hour, is not easy work.

The object of this paper is to show how the roentgenologist can be of service in the diagnosis of gastro-intestinal complications.

Practically speaking, the alimentary tract is invisible until filled with some salt opaque to the Roentgen rays. Inflation can be used but is not satisfactory. Stomach and bowels must be empty before an opaque meal is given; if not, the translucent food will displace the opaque salt and apparently cause a filling defect.

Before giving the test meal a general survey of the chest is regularly made. The meal being given we first watch the patients' mode of swallowing. Do they drink or do they suck the mixture? A small proportion of patients who complain of gaseous distention after taking but little in their stomach are in the habit of sipping. With each sip air is swallowed, and by the time the stomach is one third filled with food, gas has so distended the organ that the patient is in distress. These patients are just ordinary "stump suckers."

While the food is passing through the esophagus we are looking for obstructions. The esophagus is a very simple tube of uncomplicated structure, poor in lymphatics and has no digestive glands. It is subject to few diseases, either by extension from neighboring organs or primary inflammations.

\* Read at the 60th Annual Session, Missouri State Medical Assn., Springfield, May 14-16, 1917.

The passing of the food from mouth to stomach is an act of deglutition and is under control of the nervous system. Fast swallowing leaves the "food-gulps" following each other at intervals of about three to four inches in the esophagus until the cardia is reached where they are retarded and from which point a steady stream flows into the stomach. If we have more than this normal showing, what is the obstruction due to?



Fig. 1.—Prepyloric annular carcinoma. Arrows point to the small stream of barium passing through carcinomatous collar.

The word esophagus means carrier of food. We have seen above that the esophagus is under nervous control. An abnormal condition of this nervous control is the cause of cardiospasm. Cardiospasm is a spastic contraction of the cardia lasting from a few minutes to months. It is a condition caused reflexly by a disturbance of the several branches of the vagus nerve which supplies the entire length of the esophagus. Because of the intimate sympathetic relation, disturbances need not originate in the vagus to cause cardiospasm. The trouble might lie in the stomach, gallbladder, appendix and other organs. The important question to determine is whether the obstruction is cardiospasm—functional, or an inflammatory infiltration—carcinoma.

Krauss has especially helped us to distinguish between cardiospasm and carcinoma. In spasm we usually have a sudden inability to pass food into the stomach, with an increase of peristaltic action of the esophagus above the constriction. A hypodermic of atropin will usually relieve the condition temporarily. On the other hand, if the obstruction is caused by inflammatory infiltration—carcinoma—the onset is gradual and nothing short of dilation would cause a more rapid flow of food through the obstruction.

The esophagus can be seen nicely by placing

the patient at such an angle to pass the light through a point between the spine and heart—left shoulder 45 degrees to the tube. If a roentgenogram is made in this position, using a powerful transformer with a moderately soft tube, the inflammatory deposit can be seen surrounding the constriction. There can be seen the outline of the carcinoma with a thin stream of barium, suspended in jelly, passing through the constricted esophagus. Several examinations may be necessary to make the diagnosis, but at no time will a carcinoma suddenly pass the food.

As the food enters the stomach we note its position, form and the character of the peristaltic waves. The first study of stomach and bowels was directed toward position and form. Today it is of minor importance to know the position of the stomach except as a symptom. Function is the keynote. The patient standing, the stomach may reach the pubic bone and in thin subjects is usually quite lower than the average.

The patient is now put on the trocroscope for further observation. Here we take careful note of the waves and look for unusual incisures. We watch the bulb to see whether there are filling defects. We have now reached a point in the examination which I consider one of the greatest advances in gastro-intestinal diagnostic work, namely, palpation under screen guidance.

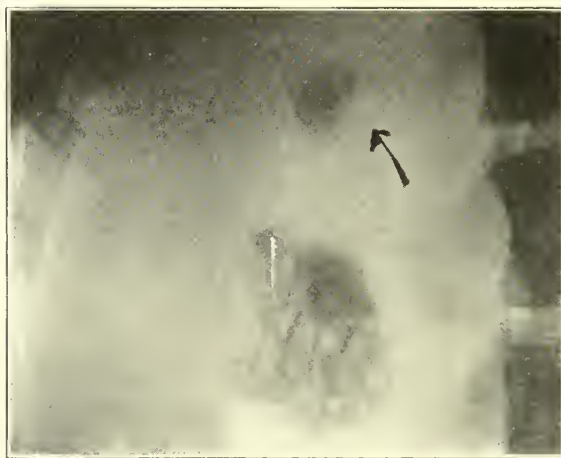


Fig. 2.—Gallstones, producing no symptoms, in a patient 21 years old. Arrow points to separate gall-stones in the duct.

Plate records are desirable but pain points must be palpated. Practically all abdominal points can be palpated except those high under the costal margins and those low in the pelvis. Only one who has palpated the opaque filled gastro-intestinal tract can appreciate visualized palpation under screen guidance.

Caution is, of course, necessary. With the latest appliances for protection for both patient and observer the dangers of fluoroscopic exam-



inations are small. The intelligent use of the foot switch is of great service.

With the protected hand, palpation under the screen is done to note painful points and to find adhesions. If there are filling defects, are they persistent or painful? In the stomach we may have unusual disturbances due to some remote organ, as will be later shown.



Fig. 3.—Appendix buried retrocecal for several years and not discovered in three previous operations. Arrows point to appendix.

I will not attempt to give you the symptoms of gastric lesions. I wish to say that you might find no symptoms which the case justifies, and find symptoms not expected. For instance, I will show cases in which there was gastric retention for more than five days, but no vomiting. I will show you colon obstructions with no constipation. In carcinoma of the stomach we have some patients eating everything they wish and denying pain, except to deep palpation. Other patients can take little or no food at all, and are in constant pain. A peculiar thing to me is a patient, with partial retention for days, taking three meals daily. I try to forget the classic symptoms and study each case as an individual.

During the stomach examination the organ itself is palpated, as well as its surroundings, especially the surroundings of the bulb. If the bulb fills irregularly, is it painful and persis-

tently irregular, or is the painful point outside of the bulb? Does the painful point move with the bulb? To distinguish between pain in the bulb and pain in the gallbladder is of utmost importance.

Ulcer is not always discernible from carcinoma. Advanced carcinoma can, of course, be recognized. What the pathologist must search for with the microscope, the roentgenologist cannot see in the living subject. Every surgeon of wide experience has operated for carcinoma and found ulcer. Every roentgenologist of wide experience has diagnosed ulcer when carcinoma was present.

The patient is now dismissed for three hours, with the caution not to eat or drink until after the next examination. At the third hour we usually find the stomach one third full, the balance of the barium being well scattered in the small bowels. At each examination the entire filled gut is palpated and adhesions and irregularities looked for.



Fig. 4.—Prepyloric infiltrated ulcer.

At the fifth hour we find the stomach empty, and the barium in the terminal ileum and cecum. The intestinal loops are separated. Pain points are sought.

Between the ninth and tenth hours the patient returns. The average successful business man gets to his office at about nine o'clock. The union mechanic works eight hours. At ten hours the roentgenologist is looking at fecal matter. We now find the barium from the

terminal ileum to the transverse colon. Our attention is now directed to the terminal ileum and the cecum. Here we may find obstructions to the onward flow of the intestinal contents. The terminal ileum can be bound down by inflammatory bands or postoperative adhesions.

Slide 21 shows a forty-eight hour deposit in the terminal ileum caused by adhesions following operation for appendicitis. In this case the terminal ileum and cecum could not be moved under palpation. At this hour we look for the appendix. Who can say where the appendix lies? We know where Gray's anatomy told us to look. I will show an appendix going up to the gallbladder and adherent in its entirety. Again the cecum can dip down into the true pelvis. The appendix can reach over to the left lower quadrant. If it shows, is it painful or movable? If it does not show, is the cecum movable or painful?

To again illustrate the value of palpation I will cite the following cases:

On Aug. 31, 1915, Mrs. Z. was referred to me for examination by Dr. Hanser. I was told that the patient suffered much pain in the right lower quadrant and constipation was obstinate, and had been so for a long time. The patient was given a test meal which took a natural course until the terminal ileum was reached. Here there was a marked delay, lasting thirty hours. There was much pain to deep palpation. From the tenth to the thirtieth hour a thin stream of barium was seen passing through the terminal ileum. The appendix was seen filled and lying across the terminal ileum, which was not movable. A diagnosis of chronic appendicitis with adhesions of the appendix to the terminal was made. This was verified at operation.

On Aug. 10, 1915, Miss M. was referred by Dr. Winter. Miss M. is 20 years old. She states that in the past two years she has undergone three abdominal operations. The first operation was for appendicitis. After recovery the doctor told her he could not find the appendix. About eight months later she was operated on a second time, also for appendicitis. She had changed surgeons. This surgeon told her the first operator had removed the appendix. The main symptom at all times was pain in the right lower quadrant.

The patient went from bad to worse and was operated on a third time. In August, 1915, she came to the Lutheran Hospital for relief and was referred to me by Dr. Winter. Her symptoms at this time were constant pain in the belly and vomiting, a slight rise of temperature in the evening, a quickened pulse and general disability.

She was given a test meal. No abnormal conditions were noticed until the ninth hour. While palpating the cecum I caught a glimpse of the filled appendix. The cecum was tender and not freely movable. I found it very difficult to get a second look at the appendix, and worked, possibly, fifteen minutes to roll the cecum over enough to be able to draw the appendix clear of the gut to get a plate (see Fig. 3). A diagnosis of chronic appendicitis with retrocecal adhesions was made.

Three days later the patient was operated on by Dr. Nietert. When the cecum was brought out of the abdominal wound an apparent scar, about the size of a nickel, was seen in the normal site of the appendix. No appendix was seen and the gut was

smooth. But in feeling along the ascending colon posteriorly the cord-like appendix could be felt. This operation has relieved the patient of her distressing symptoms.

Going along the ascending colon we watch for filling defects and adhesions. At the hepatic flexure we are particularly careful to note painful points in relation to position, especially in relation to the gallbladder and the bulb. The case of Mr. W. illustrates the value of roentgenological examinations of the hepatic flexure of the colon.

Mr. W. was referred by Dr. Busse. Patient stated that fifteen months ago he had been operated on for gallstones. The operation had given relief for six or eight months, but he was now suffering from pain in the same region and feared a return of his old trouble. Pains were especially bad when the patient was distended with gas. He suffered from indigestion and constipation. Plates for gallstones showed no shadows and the patient was given a test meal. The meal advanced in a normal way. When the hepatic flexure was reached, we noticed the condition seen in plate (Slide 22).

The hepatic fold could not be moved and was the point of greatest pain to palpation. A diagnosis of adhesion to the abdominal wound was given. This condition was found at operation and the patient has been relieved.

At the twenty-sixth hour the patient returns. If the appendix shows, is it adherent, kinked or segmented? The transverse colon is now filled and the barium should reach to the ampulla.

Examining the transverse colon we note its position. Is it movable or bound down by adhesions. The transverse colon may occupy any position from the costal margins to being a pelvic organ.

While speaking of the transverse colon I desire to mention the following case. This case illustrates the fact that no diagnosis of any part of the gastro-intestinal tract should be made until a complete study of the digestive system has been made.

Miss K. was referred July, 1915, by Dr. Schmallhorst with the following history. Patient had been operated on for appendicitis about a year previous to this examination. The doctor states that the appendix was very long, extending to the hepatic flexure of the colon and adherent in its entire length. Much difficulty was experienced in its removal. The patient did fairly well for a short time only, when vomiting began.

Patient became much constipated and was suffering constant pain—as she expressed it—in the stomach. At the time of this examination Miss K. could take little or no food. Vomiting was persistent, pains constant and constipation obstinate. All trouble was referred to the stomach.

A test meal was given, which progressed normally until it reached the terminal ileum where there was a thirty-hour delay. At forty-eight hours the ileum still showed a barium deposit. The ileum was bound down low in the pelvis and was painful to deep palpation.

After passing the ileum the barium column came to a stop about the center of the transverse colon. Here the column rested twenty-six days notwithstanding



ing the fact that after the tenth day three and four enemas were given to dislodge the mass. Of course some was passed daily, but the twenty-seventh day still shows a faint trace of barium in the transverse colon. On the twenty-ninth day a barium clysma was given and stereoscopic plates were made.

As seen in the stereoscopic view, the colon is constricted as if tied with a puckering string and its lumen seems about the size of a lead pencil. A diagnosis of postoperative adhesion bands was given. Four days later the diagnosis was verified when the patient was operated on at the Lutheran Hospital.

At the fiftieth hour the patient returns. Does the appendix still show? If so, it is poorly drained and a poorly drained appendix possesses a danger in proportion to the length of time it takes to empty itself.

The patient is examined once daily as long as is necessary, but usually nothing is gained by an examination lasting longer than five days.

The patient is now allowed one or two days to completely empty the bowels of all barium residue. On the day selected for the barium clysma the patient is given three small enemas of warm water. Each enema is to be expelled before the next is given. About three hours after the last enema the clysma is injected with a common fountain syringe, the patient being on the back on the trocroscope. The mixture is raised about three feet above the patient's hips. It is well to have a bulb in the line of the irrigator to use some pressure in case of a clog. To fill the colon takes about three to five minutes and about 40 ounces of the mixture at body temperature is used. While filling the colon we watch for points of obstruction, filling defects and everything abnormal. When the colon is full the gut is palpated, if desired a plate made and the patient dismissed.

During the colon examinations some interesting observations are made. Adhesions of the transverse colon to old abdominal cuts are often noticed. During the injection the transposition of the pelvic colon is often seen.

Incompetency of ileocecal valve is looked for. The ileocecal valve was discovered by Bauhin in 1579. Other writers in 1856, 1676, 1641 mention the valve. Cannon has observed that the valve acts similar to the pylorus, retaining the foodstuffs in the smaller intestines until the digestive work has been completed and the foodstuff absorbed.

The purpose of the ileocecal valve is:

First: To hold back the digesting material in the small intestine.

Second: To pass unusable food residue in small quantities to the colon where the water is absorbed.

Third: To prevent reflux of material from the colon into the ileum.

Each function of the valve is of importance to the integrity of digestion and the welfare of the body.

The results of incompetency are, ileal stasis

and regurgitation of colon contents into the ileum, with the concomitant symptoms of feeding on putrefactive material.

I have given but a small idea of the possibilities of the Roentgen ray when used in conjunction with the opaque meal in gastro-intestinal examinations. Please understand that I do not speak of a Roentgen ray diagnosis. The Roentgen rays are a diagnostic aid by which we extend our vision from the surface to the interior of the body.

3446 Shenandoah Avenue.

#### THE CONSERVATIVE AND SURGICAL MANAGEMENT OF GONORRHEAL PYOSALPINX\*

WM. KERWIN, M.D.  
ST. LOUIS

The gonococcus gains entrance to the fallopian tubes through the external os of the cervix uteri and according to Menge<sup>1</sup> 80 per cent. of all adult females acquiring gonorrhea have primarily infected cervixes. The cylindrical epithelium of the cervix is quickly undermined by the gonococcus, although here the germ may remain semi-latent for a considerable length of time.

Unfortunately for woman, it requires but a cool invitation for its advancement upward. Mild exercise or menstruation suffice. With but few exceptions, gonorrhea ascends at the menstrual period. It is for this reason that absolute rest in bed at this time is so important in the gonorrheic woman.

Once the gonococcus has passed the internal os it quickly makes its advent in the tubes to pass out to the ovary. It is spread by the mucosa, although the ovary may be infected through the lymph channels. We have now before us a fully developed case of ascending gonorrhea, and how are we to manage it? The treatment at this time must necessarily be symptomatic, absolute rest being the essential factor, ice controlling the pain and fever.

I usually carry out Crile's<sup>2</sup> treatment if there are signs of peritonitis, viz.: morphin at stated intervals, to tie up the metabolism and stop intra-abdominal motion, ice over the entire lower half of the abdomen, nothing by mouth, and body fluid waste replenished by proctoclysis. The ice is kept on the abdomen until the temperature has been normal for three days.

Operative interference up to this time is decidedly contraindicated. I have never seen a case of ascending gonorrhea causing peritonitis that required operation in the acute stage.

\* Read before the St. Louis Medical Society, Jan. 27, 1917.

1. Menge, K.: *Handbuch der Geschl.*, Vienna, 1910.

2. Crile, G. W.: *Ann. of Obst.*, N. Y., 1915, lxxi, p. 264.

even though vomiting and distention of the abdomen were present. These cases respond very happily to the above treatment and usually within a week or ten days the temperature is normal. When a case fails to respond to the treatment as outlined and the temperature, instead of receding, remains high and goes higher, after two weeks, you no longer are dealing with a case of gonorrhea but have a mixed infection, the invading organism being, as a rule, the colon bacillus. This type of case must be relieved by operation. We encounter this type very rarely in private practice, but it is not infrequent in our City Hospital where the patients are brought in late in their disease and more or less neglected.

After the temperature has been normal for three days we must decide whether the case is to be treated conservatively or by operation. If the conservative method is employed, biman-

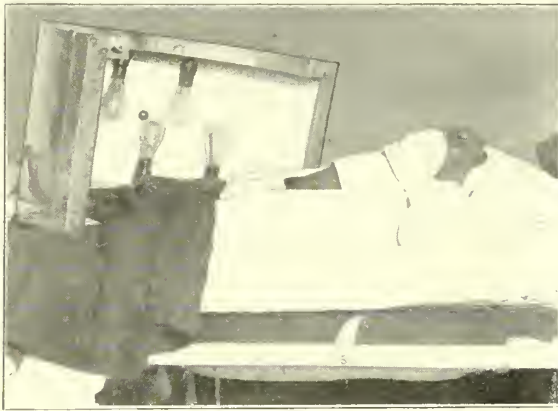


Fig. 1.—Apparatus and patient put in order for the dry heat application. Observe the area of the body exposed to the heat.

ual examination is uncalled for at this time; whereas, if operation is decided on it is well for the surgeon to know how much damage has been done by the fire, or whether it would be well to treat the case conservatively until operation can be done satisfactorily. We see many cases in the quiescent stage where no surgeon would attempt operation, or, if he did, no results could be accomplished because of the grossness of the pathology. It is not uncommon to see a patient entirely comfortable, with little pain and no fever, presenting a hard, exudative mass completely filling up the pelvis, engulfing all the pelvic organs and extending to midway between the symphysis and umbilicus. To be sure, our private cases are never allowed to advance this far, but it is almost a daily occurrence to have such a patient enter under our service at the City Hospital. This affords us an opportunity of observing the effect of a conservative management of these cases, which I will describe in detail.

Unfortunately, because of social conditions

in life, not all women can avail themselves of conservative treatment. If such were possible, every case of ascending gonorrhea, no matter how extensive, could be cured without operation. When we consider the number of young married women whose chances for motherhood are sacrificed by the removal of pus tubes we will regard more highly a treatment that will offer to them a possibility of future pregnancies.

What does the conservative treatment consist of? A patient who has been carried to the quiescent stage, requiring as a rule from one to two weeks, is put on protracted dry and moist heat applications. Dry heat is more efficacious because of the higher degree tolerated by the patient and her tissues. The effect of dry heat is two-fold, viz., bringing about absorption through the hyperemia produced, and killing the gonococcus. It is entirely within the bounds of comfort for a woman to tolerate from 200 to 300 F. of dry heat for one hour, providing a small portion of the body is covered. Since it requires 105 F. but fifteen minutes to kill the gonococcus it is evident what the above degree of heat will do even though all of it does not penetrate the tissues.

The heat is applied by means of an apparatus designed after the pattern introduced by Gellhorn about ten years ago. It is an asbestos-lined, aluminum case which bridges over the abdomen and contains eight electric bulb sockets. These are filled with 16 W. bulbs. After the apparatus is placed, it is covered on the ends by heavy blankets, which fit snugly around the patient so as to retain the heat in the cabinet. Only the area extending from the symphysis to the umbilicus and from the anterior superior spine of one ilium to that of the other is exposed. The switch is turned on and the moisture derived from the perspiration of the patient is taken up by calcium chloride bags which are hung on the inside hooks. It is important to do this and thereby prevent blistering. Within fifteen minutes, the temperature rises to 200 degrees.

While under the heat the patient is kept busy drinking water. It is not unusual to see a patient drink four or five quarts of water in one hour if she is properly encouraged. The free drinking of water acts as an eliminant of the toxins as they are freed by the absorption of the masses, incidentally corrects the constipation and exerts a decided tonic effect on the system.

One application is made daily and results are obtained early. After the dry heat has been kept on for one hour it is discontinued and the protracted douche started. This consists of a continuous flow of water at a temperature of 115 F. into the vagina. This part of the treatment lasts from thirty minutes to two hours. The patient lies on a comfortable shelf in the bathtub and while the douche is in progress may



take her midday sleep. The hot douche continues the results obtained by the baking apparatus.

The blood picture presented during the course of treatment is most interesting and is a clue to the progress being made by the patient. This work was done by Dr. Kelly, of the junior intern staff of the City Hospital, and it is to him I am indebted for the pictures. I wish to call attention to the steady increase in hemoglobin and the red blood corpuscles and the gradual decrease in white cells. The leukocytosis is never high in gonorrheal pyosalpinx. As you know, this is a differential point in diagnosis. An increasing leukocyte count speaks for an invading organism.

Table 1.—All the five cases have large, acute masses completely filling up the pelvis. Observe the steady improvement in the patient noted by the rise in the hemoglobin.

HEMOGLOBIN ESTIMATION

	Sept. 15	Sept. 18	Sept. 21	Sept. 25	Sept. 30	Oct. 7	Oct. 18	Oct. 22	Oct. 26	Oct. 29	Nov. 4
Case 1 (O. P.)											
Aged 32.....	80	80	80	80	85	85	85	85	85	85	85
Case 2 (J. W.)											
Aged 23.....	70	70	75	85	90	90	..	..	..	..	..
Case 3 (R. B.)											
Aged 22.....	75	75	75	75	75	80	80	85	85	85	85
Case 4 (S. T.)											
Aged 26.....	70	70	75	80	85	85	..	..	..	..	..
Case 5 (M. L.)											
Aged 30.....	70	70	70	70	70	70	80	80	85	85	..

Exudates such as have been described disappear within six weeks and tubes the size of bananas return to normal. The pelvic organs become astonishingly free from adhesions. The treatment if begun early enough—I mean by that if the patient is seen and put at rest before the pathology becomes too gross—will restore the pelvic organs to their normal state and the patient will remain well. If complete restoration cannot be brought about, or if the patient refuses to continue the treatment long enough, exacerbations will occur just the same as where any other form of treatment has been carried out. It is essential that the patient remain in bed throughout the entire course of treatment. I believe that many a woman with a large, metritic uterus en masse in an exudate with an accompanying double pyosalpinx and perioophoritis can be entirely cured and bear children. I am justified in this belief by the result obtained in the following case.

Mrs. S., aged 24, referred by Dr. Lund Dec. 26, 1911. Patient had been acutely ill for two days with pain in both lower quadrants of the abdomen and fever. It was almost impossible for her to walk. The history of a profuse vaginal discharge with painful and frequent urination for two weeks previous to the menstruation, still present, was obtained. Her husband was being treated for gonorrhea at the time.

Examination showed temperature 102.4; pulse 120; abdomen rigid and extremely sensitive over the entire lower half; vulva and vagina bathed in a purulent bloody discharge; pus expressed from the urethral

orifice and Skene's ducts showed gonococcus; cervix edematous. Back of the cervix was a hard, highly sensitive mass which filled the culdesac. The uterus rested in front of this mass and was found to be enlarged, softened and sensitive to touch. To either side of the uterus there could be felt a mass the size of the wrist extending toward the lateral pelvic walls and deep into the culdesac. The masses were sensitive, fixed and sausage-shaped.

*Diagnosis.*—Ascending gonorrhea with resulting endocervicitis, metritis, double pyosalpinx, and pelvic exudate; ovaries probably involved.

Patient was subjected to the above-outlined treatment, plus the introduction of ichthyol-glycerin tampons daily for a few weeks and then tri-weekly. In six weeks examination revealed pelvic organs normal, no sensitiveness on pressure over the uterus, tubes or ovaries. The patient was allowed to get out of bed and the treatment was continued for two weeks. She remained entirely well and is well at the present time.



Fig. 2.—The treatment in progress.

The diagnosis in this case cannot be questioned. The results obtained could be were it not for the fact that she subsequently became pregnant and I delivered her of a 7 pound girl on May 18, 1915, three and one half years after receiving her infection.

I am supported in my views as to the advisability of conservative treatment of these cases by Prochownick's<sup>3</sup> valuable statistics. His report includes only cases seen four or more years previous. Four hundred and twenty cases showed 160, or 38 per cent., of permanent cures. Seventy per cent. of these were treated for from four to six weeks. Of the 160 cases eighty-five, or over 50 per cent., remained well after one course of treatment. Of these fourteen subsequently gave birth to children and three aborted. After a second course of treat-

3. Prochownick, L.: Monats. f. Geb. u. Gynec., 1909, No. 20, p. 453.

ment twenty-seven remained well and three became pregnant of whom one aborted. In other words, one in eight cases cured became pregnant. Some of the cured cases were women who remained single and others were near the end of the childbearing age when infected. No deaths occurred in the cases treated palliatively.

Henkel<sup>4</sup> states that in 80 to 90 per cent. of all inflammatory affections of the adnexa subjective healing occurs following judicious, non-operative treatment. Olshausen<sup>5</sup> is a firm believer in the palliative treatment. Goth<sup>6</sup> reports on 700 cases treated conservatively in Szabo's clinic giving excellent results. De Rouville<sup>7</sup> reports on forty cases with thirty-two cures and three becoming pregnant.

The above treatment is begun on every case of ascending gonorrhea that enters the City Hospital under out service. The majority are

been deceived, for her symptoms return shortly thereafter and she now feels that it is the remaining uterus which is responsible for her backache, pelvic pain and gastric distress and her new formed symptom, which is to remain with her for life, viz., neurasthenia. It is an easy matter for her to persuade a third surgeon to remove the uterus; and she then leaves the field of gynecology, to enter on a new and everlasting field, viz., neurology.

I have become more firmly convinced of the justification of radical surgery every year because I have seen numerous patients subjected to one or two operations of lesser extent return for the removal of those organs left behind. I maintain that the best and quickest way of curing a patient of ascending gonorrhea by operation is by removing the tubes and uterus in toto. Whether or not the ovaries should be removed depends on their condition.

Table 2.—A corresponding increase in red cells takes place.

Case	Age	RED CELL COUNT										
		Sept. 15	Sept. 18	Sept. 21	Sept. 25	Sept. 30	Oct. 7	Oct. 18	Oct. 22	Oct. 26	Oct. 29	Nov. 4
1. J. P. . . .	32	4,000,000	4,400,000	4,200,000	4,000,000	4,400,000	4,100,000	4,400,000	4,540,000	4,500,000	4,520,000	4,600,000
2. J. W. . . .	28	4,200,000	4,160,000	4,240,000	4,340,000	4,450,000	4,680,000					
3. R. B. . . .	22	3,900,000	3,940,000	3,980,000	3,680,000	4,000,000	4,120,000	4,400,000	4,510,000	4,540,000	4,620,000	4,590,000
4. S. T. . . .	26	4,190,000	4,190,000	4,200,000	4,310,000	4,460,000	4,620,000					
5. M. L. . . .	30	4,120,000	4,100,000	4,130,000	4,240,000	4,200,000	4,000,000	4,400,000	4,530,000	4,510,000	4,540,000	

Table 3.—The leukocyte count, never high, goes to practically normal under the conservative treatment.

			WHITE CELL COUNT										
			Sept. 15	Sept. 18	Sept. 21	Sept. 25	Sept. 30	Oct. 7	Oct. 18	Oct. 22	Oct. 26	Oct. 29	Nov. 4
Case 1	(J. P.)	aged 32.....	13,200	13,000	12,800	12,000	12,400	12,800	13,000	11,200	10,800	10,000	8,400
Case 2	(J. W.)	aged 25.....	15,600	16,000	15,400	12,200	11,000	9,000	.....	.....	.....	.....	.....
Case 3	(R. B.)	aged 22.....	11,200	11,600	11,000	11,200	10,800	11,200	11,000	10,600	9,800	9,200	7,800
Case 4	(S. T.)	aged 26.....	14,200	13,000	12,600	10,800	8,200	.....	.....	.....	.....	.....	.....
Case 5	(M. L.)	aged 30.....	13,000	12,800	9,600	10,200	10,000	9,400	10,800	9,800	10,000	9,400	.....

symptomatically cured in from one to two weeks and demand their dismissal, while of the remainder a high percentage prefer operation because of the time saved and the necessity of getting back to their employment. Because of this and the fact that mixed infection takes place in some of these cases we are compelled to consider the surgical management. The radical operation should be adopted.

The apology I have to offer for radical surgery in pyosalpinx is that it tends toward conservatism. How often do we see a woman who has sacrificed both tubes and one ovary return with severe pelvic pain and on examination find an enlarged cystic ovary with a metritic and adherent uterus. At the second operation she gives up her remaining degenerated ovary for the good cause and thinks she will now be well, for she has been told the same by her surgeon who, however is not as a rule the one who performed the primary operation. Again she has

In the majority of instances these have been so involved in the process that to leave them behind means to invite another operation sooner or later. It certainly is a serious matter to unsex a woman but on the other hand it is false sentimentality to leave ovaries if your experience has taught you that possession of such ovaries will give rise to distress much greater than that following an artificial menopause.

The age of the patient should have little to do with the question, but it may be added as a point of interesting information that according to the statistics and experiences of Olshausen, Peterson,<sup>8</sup> and Mandl and Buerger,<sup>9</sup> younger women seem to suffer less from climacteric symptoms after castration than women in the fourth or fifth decennium.

In order to compare the final results of the radical operation such as I have outlined above, and other less complete operative methods for the cure of pyosalpinx I endeavored to follow

4. Henkel: Quoted by Esch, *Ztschr. f. Geb. u. Gynec.*, 1907, lix, No. 1.

5. Olshausen: *Handbuch d. Gynec.*, 1907, 1-717.

6. Goth: *Arch. f. Gyn.*, xcii, No. 2, p. 300.

7. De Rouville: *Annal. de Gyn. et d'Obst.*, October, 1910.

8. Peterson: *Am. Jour. Obst.*, 1908, lvii, No. 5.

9. Mandl u. Buerger: *Die biologische Bedeutung der Eierstocke nach Entfernung der Gebärmutter*, Leipzig and Wien, 1904, F. Dielcke.



up the cases operated on in the past two years at St. Louis City Hospital. There were 129 cases, excluding cases of fibroids or other pelvic conditions complicated by pus tubes. These operations were done by fifteen visiting gynecologists, thirteen doing the incomplete operation and two choosing the radical procedure.

The Social Service Department was able to trace but twenty-eight of the cases operated on completely. Of these, fifteen were reported well by the patient herself or some one living in the same house, six were reoperated on and seven were under the care of a physician because of pain in the lower abdomen. This means that practically 50 per cent. were not benefited by the incomplete operation.

The fruitless task of tracing these cases discouraged the department in getting data on the



Fig. 3.—The continuous vaginal irrigation, which can be given in any household bathtub.

cases operated on radically. I am therefore able to report only on my private cases. There are six cases of panhysterectomy from two to four years old ranging in age from 21 to 45 years. I have examined all of these cases recently in my office. Five of these women are entirely free from discomfort, have never had any climacteric symptoms, and experience no lessening of sexual desire; while one, aged 45, has all the symptoms of the menopause.

Norris<sup>10</sup> reports thirty-one complete operations with thirty cures and only one patient suffering from artificial menopause. Giles<sup>11</sup> reports eighteen radical operations with seventeen free from symptoms and one suffering from artificial menopause. He states that the sexual desire remained unaltered in most of them.

10. Norris: Textbook, 1913.

11. Giles, A. E.: Jour. Obst. and Gynec. of British Empire, March and April, 1910.

#### CONCLUSIONS

1. Acute cases of ascending gonorrhea should be treated by rest in bed and ice bags to the lower abdomen.

2. After the fever has subsided, conservative nonsurgical treatment should be instituted. The most efficient method is the application of high degrees of heat over the abdomen and through the vagina. The special technic employed is described in the foregoing.

3. With this conservative treatment most cases of ascending gonorrhea can be cured.

4. When the patient is unwilling or unable to spare the necessary time, operation must be resorted to.

5. Extensive experience, both in this country and abroad, has proved that panhysterectomy yields the best results.

6. Incomplete operations, in which portions of the infected genital tract are left behind, fail in a very large percentage of cases to restore the patient's health. Many of these patients have to be operated on again.

7. The principle should be: In cases of pyosalpinx, avoid operation if possible or, if you have to operate, operate radically.

Lister Building.

#### A CASE OF POISONING BY IRISH POTATOES

E. H. ROBERTS, M.D.  
MARSHFIELD, MO.

In every doctor's practice there comes at times the unusual case. This case will be of interest because the source of the poison is so generally used for food—a case of solanin poisoning caused by eating a quantity of raw potatoes which were being prepared for planting.

*History.*—P. F., a farmer, aged 42, strong and in excellent health, returned from work in the evening and ate a quantity of the raw potatoes before the evening meal. At about daylight he awakened with a "colic pain." He said he thought it was only colic and would wear off. Instead, the condition gradually became worse. I saw him twenty-four hours after the attack began. During that time the pain had gradually increased and had extended over the entire abdomen. He had no nausea, no vomiting, bowels did not move except with enema, and then slightly, had not urinated since onset of illness, slight headache. Had been belching small amounts of bile colored fluid every ten to thirty minutes. No air eructated or flatus passed.

Previous history showed that bowels and kidneys have acted normally; that there has been no illness of any sort for the past ten years. Ten years ago had a slight indigestion which lasted only a few hours.

The following conditions were present on my arrival: Anxious and worried expression, slight pallor of face, pupils contracted, reacting a little to light, face and hands moist with cold perspiration, tongue gray coated, throat and lungs negative, pulse 120, low tension, slightly irregular; respiration 30 to 32, shallow, with inspiration shorter than expiration; temperature 93.3, abdomen showed no distension, normal tympany all over, general muscular rigidity (not boardlike). No special point of ten-

derness or pain. No area of bladder dulness. Some nervousness, shown by rolling the head and fine tremor of the fingers. Reflexes not tested.

Gave morphin sulphate  $\frac{1}{4}$  grain, and ordered sulphate magnesia, 1 ounce, and enemas at intervals of two hours until bowels moved.

Later in the day he said pain was still increasing. Temperature and respiration were unchanged. Pulse a little more irregular and more feeble. Pupils were dilated and less active to light. No nausea or vomiting. Slight result from enemas, no blood, no tenesmus.

Personally gave enema with slight result. Washed out stomach, washings containing some castor oil taken earlier, much water, and some bile. There were no solid particles, no blood, no feces, no fecal odor. The quantity of material was about one-half gallon. At no time did he note gurgling of bowels nor did I note gurgling, see or feel peristalsis.

There was some relief for a half hour after the lavage. Then he began to grow worse, i. e., respiration more shallow, pulse weaker and more irregular. A short time after midnight had small normal bowel movement, and passed about eight ounces of urine. Within twenty minutes of this time patient died in severe convulsion. During the convulsion a large amount of fluid was regurgitated, brown and greenish in color, fecal odor, but no blood, or solid particles of food or feces.

Total duration of illness forty-four hours. The most striking symptoms were (1) lack of abdominal distension; (2) no nausea or vomiting; (3) rapid, weak, and irregular pulse; (4) rapid respiration; (5) constant subnormal temperature; (6) the prostration; (7) contraction and later dilation of the pupils.

#### OUR BUSINESS BUREAU

At last the medical profession has awakened to the fact that they need not be imposed on by the habitual deadbeat. In organizing the Business Bureau of the St. Louis Medical Society the fellow who does not believe in paying his doctor's bill will soon be eliminated.

Too much credit cannot be given to the committee that has charge of this department. They have established one of the best bureaus of its kind in the city. It is complete in every detail. Every department necessary to its success has been made up of the most experienced people. Miss Massot, who has charge of the office, has had over five years' experience with two of the best known commercial agencies in St. Louis coming direct from one of them to take charge of our bureau. The collection department is in charge of Mr. Joseph Broderick who has been engaged in collection work for a number of years and has made a specialty of doctors' bills. He will be assisted by three collectors of considerable experience. Mr. John E. Mooney, formerly assistant prosecuting attorney and now excise commissioner of St. Louis County, with offices in the Times Building, Broadway and Chestnut Street, is in charge of the legal department.

In a brief way the following is an outline of the workings of this bureau. You can on request either by telephone or letter secure as many form letters as you desire at a cost of 5 cents per copy which you send to your delinquent patients. If you get no results the account is given to the bureau. Miss Massot will then take hold of it and if she cannot obtain a satisfactory response the matter will be placed with the collection department which will do all in its power to secure a settlement. If unsuccessful you will be given a report of the status of your account together with all the information gathered by the bureau. If you care to pursue the matter further it will be turned over to our attorney who will write the debtor. If no results are attained by his letter you will be notified, and, if you desire, suit will be brought but under

I have collected a few notes from various sources concerning solanin and solanin poisoning by the potato.

Dorland; Solanin; Alkaloid  $C_{42}H_{72}NO_{18}$ , found in potato, black nightshade, etc.

Cushing says that experimentally solanum causes death by respiratory paralysis. Smaller doses induce depression, loss of appetite, general weakness and collapse, with some dyspnea, and irregular and feeble pulse.

Reference Handbook of Medical Science says important food plants are usually found closely related in some families to violent poisons. Solanaceae contains nightshade, stramonium and henbane. It is also found in the potato, eggplant and tomato. The potato itself is sometimes poisonous.

Osler says all potatoes contain about 0.06 per cent. of the poison solanin. There is at times an increase caused by bacterium solaniferum non-colorable, which causes grave disturbances. This increase is in sprouting potatoes, seed potatoes and those which lay above the ground in growing. He notes an epidemic in a German regiment when fifty-six members were attacked. All recovered. Another author states that potatoes sometimes contain a poison, solanin, which resembles belladonna, stramonium, hyoscyamin and nicotine.

Pfuhl attributes many cases of mild acute indigestion to solanin from potatoes.

An epidemic described by Schmeideborg showed these symptoms: headache, colic, vomiting, diarrhea, general depression and weakness, pallor or cyanosis, dilated pupils, accelerated pulse and respiration. In some cases temperature, in others no temperature.

no circumstances will any legal action be instituted without your written instruction.

All of this service will cost you absolutely nothing except the form letter which you send out and if you desire suit brought you are to secure the court costs which are usually small on this kind of actions.

When you stop to consider the fact that the ordinary commercial agency is organized for the sole purpose of making a profit and that the doctor's account is looked on as poor business you will realize that it is to your advantage to give this new department of our society, which is not to be conducted at a profit, your wholehearted and enthusiastic support. A commercial agency gives practically all their time to collecting for commercial houses and do not look on the doctor's bill with a great amount of favor. Their activity usually consist of writing the debtor and of turning the account over to a collector who, if he finds it convenient, calls on the debtor. If he meets with no success the account is dropped.

The only expense the bureau has is the cost of stationery, stamps and the salary of the stenographer. Neither the collectors nor the attorney receive a salary. They only receive a commission on the money actually collected by them and unless you recover on what is a hopeless proposition to you you pay nothing.

If this were all the bureau intended to do you would be greatly benefited, but stop to consider that in conjunction with this you have an Information Bureau which will give you the protection which every physician should appreciate.

Every member of the St. Louis Medical Society is requested to send in his report of bad pay patients, so that the bureau will be able to meet the many requests for rating information which it is receiving.

By devoting a great deal of time and work to the various departments in this new activity of the medical society the committee has done all that is possible to insure its success. It is now before the medical society to do with as they see fit. Its success depends entirely on your active support.—*Bulletin of St. Louis Medical Society.*



# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

JUNE, 1917

### EDITORIALS

#### SIXTIETH ANNUAL SESSION

The war was a factor in keeping down the attendance at this sixtieth annual session of our Association at Springfield. Several members who were on the program to read papers were compelled to remain at home in order to discharge duties for the government in connection with the mobilization of the medical forces of the state, while many others who would have been present to take part in the annual proceedings were prevented because they had already enlisted or were arranging their affairs in anticipation of the call to join the colors. Nevertheless, 335 members registered and the meeting proved a successful gathering, at which all seemed to enjoy themselves.

The scientific program was somewhat disarranged by the absence of several essayists, but good attention was given to all those who were present to read their papers. The address of the President was a beautiful plea for continued harmony, cooperative activity and whole-hearted participation in promoting the purposes of the organization. The splendid reception of address by the members was proof of the deep and abiding affection that the members hold for the retiring president, Dr. J. Franklin Welch.

The House of Delegates concluded the business of the Association on the first day of the meeting, received the reports of committees, passed resolutions and elected officers. Two very important resolutions were adopted, one of which referred the attitude of members toward the defense of the nation in the present war. The resolution provides that any member who shall give aid or comfort to an enemy of the United States shall immediately forfeit his membership in the Association. The other resolution requests members who remain at home during the war to take care of the practice of physicians who are called into the service, and turn over a certain percentage of the income derived from these patients to the physician on his return or to his family. A committee of five was appointed to formulate definite plans

for carrying out the provisions of the resolution and submit the plans to the component societies for approval. The amendment to elect the president in the general session failed to pass.

The open meeting on "Medical Preparedness" attracted quite a large number of the people other than members of the Association, and the health lectures in the churches were well attended. The Committee of Arrangements and members of the Greene County Medical Society were constantly looking after the comfort of the members so that everyone seemed satisfied and glad that he was present. The entertainments were delightful and the ride through the city and suburbs gave the members a pleasant view of the beauty spots of the Queen City.

The county society secretaries meeting was one of the best ever held. The secretaries are live, enthusiastic and energetic, constantly planning and devising means and measures for holding and increasing the interest of the members in county society work. At the banquet they laid aside their worries and mingled together in care-free relaxation. They enjoyed the oratory of their President, Dr. O. B. Hall, and were encouraged and gratified with the beautiful tribute paid to them by our well loved retiring President, while the speeches of Dr. Schlueter, the new president, and of others, gave additional proof that the work of the county secretaries is deeply appreciated.

Dr. Robert. E. Schlueter, the new president, is well known to the members for his devotion to the principles of the organization, his broad conception of the duties we owe one to another and his unswerving fealty to the profession. His nomination and election without opposition express more forcibly than words can picture the deep conviction of the members that the highest honor within our gift has been worthily bestowed. The other officers elected are, vice-presidents: J. P. Henderson, Kansas City; H. A. Lowe, Springfield; F. B. Long, Sedalia; W. A. Clark, Jefferson City; T. W. Cotton, Van Buren; secretary, E. J. Goodwin, St. Louis; treasurer, Gail D. Allee, Lamar; councilors: L. W. Cape, Maplewood; D. A. Barnhart, Huntsville; Franklin E. Murphy, Kansas City; A. H. Hamel, St. Louis; J. H. Timberman, Marston; O. A. Smith, Farmington; all re-elected; defense committee: Dr. R. Emmett Kane, St. Louis, Chairman; R. E. Schlueter, St. Louis; C. E. Hyndman, St. Louis.

Jefferson City was selected for the place of meeting for the 1918 session.

## TEN THOUSAND DOCTORS FOR THE ARMY

The medical profession is responding with characteristic alacrity to the call of the country. From Washington comes the information that ten thousand physicians will be needed to care for the army of a million men which the government expects to have under arms on October 1 and the physicians of Missouri and especially our members have not been slow to respond to the summons; many of them, however, have not yet been assigned to duty.

On June 1 four large camps will be established where physicians will be trained in military hygiene and sanitation and army life. Fort Riley, Kansas, will be one of the camps, and the others will be established at Fort Benjamin Harrison, Indiana, Fort Ogelthorpe, Ga., and the fourth camp is to be located in Texas, at a point not yet selected.

As far as we have been able to gather information up to the time of going to press the following physicians have applied for commissions at the examining board in St. Louis. The list includes the members of the St. Louis Medical Reserve Corps of United States Army:

- \*Abbott, Fred, Wash. Univ. Med. School, St. Louis
- Alexander, R. D., Mo. Pacific Hosp., St. Louis
- Applewhite, Lee D., East St. Louis, Ill.
- Armstrong, Guy L., Taylorville, Ill.
- Ayars, T. R., 5861 Plymouth Ave., St. Louis
- Bailey, Fred W., Metropolitan Bldg., St. Louis
- Barnes, Francis M., Jr., Humboldt Bldg., St. Louis
- Baysinger, S. L., Rolla, Mo.
- Beckemeyer, Wm., Sedalia, Mo.
- Belsey, W. A., City Hospital, St. Louis
- Blair, V. P., Metropolitan Bldg., St. Louis
- Bond, H. Wheeler, Metropolitan Bldg., St. Louis
- Boone, John C., Charleston, Mo.
- Boyd, T. V., East St. Louis, Ill.
- Bradley, J. M., 4068 Washington Ave., St. Louis
- Bremser, H. L., 5300 Arsenal St., St. Louis
- Breuer, Wm. H., St. James, Mo.
- Brooks, Theo. P., 1650 S. Grand Ave., St. Louis
- Brown, John Young, Metropolitan Bldg., St. Louis
- Bryan, R. S., 3710 Olive St., St. Louis
- Bryan, W. M. C., Humboldt Bldg., St. Louis
- Cale, Geo. W., Jr., 12 Lenox Pl., St. Louis
- Campbell, O. H., 3540 Washington Ave., St. Louis
- Chendeysson, P. I., 735 S. Fourth St., St. Louis
- \*Clark, I. Ross, Metropolitan Bldg., St. Louis
- \*Clopton, M. B., Humboldt Bldg., St. Louis
- Coffin, E. L., 4503 McPherson Ave., St. Louis
- Crossen, H. S., Metropolitan Bldg., St. Louis
- Dean, J. McH., Metropolitan Bldg., St. Louis
- Delzell, W. A., Springfield, Mo.
- Deutsch, W. S., Lister Bldg., St. Louis
- Diehl, C. H., City Hospital, St. Louis
- Dixon, E. K., Barnes Hospital, St. Louis
- Dorsett, E. Lee, Wall Bldg., St. Louis
- Ellis, Edward K., Murphysboro, Ill.
- Ellis, R. V., St. Louis
- \*Eyerann, Chas. H., 3100 Pennsylvania Ave., St. Louis
- Farr, Geo. E., Shelbyville, Ill.
- \*Fischel, Walter, Humboldt Bldg., St. Louis
- Foster, H. M., 3969 Kennerly Ave., St. Louis
- Fox, S. D., St. Louis

\* Now in active service.

- Funkhouser, R. M., 4354 Olive St., St. Louis
- Gaffney, Emory C., Lincoln, Ill.
- Gilmore, Wilbur H., Mt. Vernon, Ill.
- Glennon, W. P., 3603 Lindell Blvd., St. Louis
- \*Green, Philip, Children's Hosp., St. Louis
- Grindon, Joseph, 3894 Washington Ave., St. Louis
- Griswold, Ross W., Litchfield, Ill.
- Hall, W. L., Greenville, Ill.
- Hamilton, C. O., St. Louis
- Hardaway, W. A., Lister Bldg., St. Louis
- Hardesty, J. F., St. Louis
- Harney, Louis G., East St. Louis, Ill.
- Harris, D. L., Metropolitan Bldg., St. Louis
- Harris, R. B., Abingdon, Ill.
- Higbee, E. H., Jr., Metropolitan Bldg., St. Louis
- Hill, H. R., Bachelor, Mo.
- Hynes, J. C., St. Louis
- Keller, David H., Anna, Ill.
- \*Kelley, I. D., Humboldt Bldg., St. Louis
- Kemp, Thos. J., 3518 Washington Ave., St. Louis
- Kinball, A. C., 2700 N. Grand Ave., St. Louis
- Kirchner, W. C. G., Metropolitan Bldg., St. Louis
- Koetter, A. F., Humboldt Bldg., St. Louis
- \*Kuhlmann, F. C. E., 2135 St. Louis Ave., St. Louis
- \*Leggat, A. C., Metropolitan Bldg., St. Louis
- Lehmann, C. P., Barnes Hospital, St. Louis
- Leighton, W. E., Humboldt Bldg., St. Louis
- Loeb, Virgil, Humboldt Bldg., St. Louis
- Luedde, W. H., Metropolitan Bldg., St. Louis
- Martin, Clarence, 3700 Morgan St., St. Louis
- McKittrick, O. F., Barnard Hospital, St. Louis
- Mercer, Ray, Canton, Mo.
- Miehe, W. J., City Hospital, St. Louis
- Moore, H. M., Wall Bldg., St. Louis
- \*Morfit, J. C., 3534 Washington Ave., St. Louis
- Mudd, H. G., Humboldt Bldg., St. Louis
- Munson, Carlos L., 731 S. Broadway, St. Louis
- Murrah, Frank C., Herrin, Ill.
- Nicholson, C. M., Lister Bldg., St. Louis
- O'Hara, Fred S., Springfield, Ill.
- \*Raithel, G. H., 2901 St. Louis Ave., St. Louis
- \*Ravold, Amand, Chemical Bldg., St. Louis
- Reder, Francis, Delmar Bldg., St. Louis
- Rothman, J., Mo. Pacific Hospital, St. Louis
- Scherck, H. J., Century Bldg., St. Louis
- Schissler, Edwin, Grand Ave. and Sidney St., St. Louis
- Schlossstein, A. G., 3153 Longfellow Ave., St. Louis
- Schmitz, E. F., 301 Metropolitan Bldg., St. Louis
- Seelig, M. G., Humboldt Bldg., St. Louis
- Senseney, E. T., Lister Bldg., St. Louis
- Sewing, Arthur H., Grand and Sullivan Aves., St. Louis
- Shutt, C. H., Metropolitan Bldg., St. Louis
- Simon, F. C., Wall Bldg., St. Louis
- Singleton, D. E., Clarence, Mo.
- Smith, Carroll, Humboldt Bldg., St. Louis
- Smith, H. J., Anna, Ill.
- Smith, W. L., Toledo, Ill.
- Smith, W. I., St. Louis City Hospital, St. Louis
- Spencer, Selden, 2725 Washington Ave., St. Louis
- Suttle, O. A., Mt. Vernon, Ill.
- Swahlen, Percy H., Metropolitan Bldg., St. Louis
- Tainter, F. J., St. Charles, Mo.
- Taussig, A. E., Metropolitan Bldg., St. Louis
- Thomas, W. S., Wash. Univ. Med. School, St. Louis
- Thorpe, Royal, Murphy Bldg., East St. Louis, Ill.
- Toney, Lee E., Piedmont, Mo.
- Unterberg, H., Frisco Bldg., St. Louis
- Vinyard, R., Wall Bldg., St. Louis
- Wall, O. A., Jr., 3122 S. Grand Ave., St. Louis
- Winter, Wm., 3325 S. Grand Ave., St. Louis
- Wobus, R. E., Metropolitan Bldg., St. Louis
- Woolsey, R. A., Frisco Hospital, St. Louis
- Wyche, Chas., Humboldt Bldg., St. Louis
- \*Wyer, Harry G., Kirkwood, Mo.
- Young, H. McC., 600 Carleton Bldg., St. Louis
- Young, N. A., City Hospital, St. Louis



## ACCURATE DEATH CERTIFICATES

More accurate and definite statements of the occupations of decedents should be written on death certificates. Until this is done, mortality statistics by occupations will continue to be unsatisfactory.

The Bureau of the Census is planning for the near future a monograph on tuberculosis. How much more valuable this monograph will be if it is possible to show accurately the occupations of decedents can be readily appreciated.

Physicians are aware of the importance of such statistics, and they are by education better qualified than the ordinary informant to understand a proper statement of occupation. Although not now called on by law to fill this part of the death certificate, their supervision of this item will beyond question result in much more accurate and valuable statements of occupations, and will prove of tremendous importance in public health work.

The Bureau of the Census has issued an earnest appeal to physicians to take pains to see that the occupation items on each death certificate are properly supplied.

---

## ST. LOUIS PUBLIC HEALTH LEAGUE

The organization of the St. Louis Public Health League took place at the Hamilton Hotel, March 28, 1917. The purposes of the organization are to bring about cooperative effort on the part of the various associations and groups interested in public health work and the prevention of diseases along the lines of public education, legislation and social service. The following organizations are active members: St. Louis Tuberculosis Society, Missouri State Social Hygiene Society, Prevention Committee of the Missouri Commission for the Blind, Society for the Control of Cancer, Baby Welfare and Visiting Nurses, Prenatal Care and Social Service Dept. of Washington University, St. Louis Medical Society, City Health Department.

The first thing attempted by this organization will be the establishment of an exhibit on Social Hygiene at Jefferson Barracks where several hundred new recruits are received each day. The Missouri State Social Hygiene Society is preparing the exhibit which is to consist of about twenty-four charts measuring 22 by 28 inches. Frames and backgrounds are being furnished by the St. Louis Tuberculosis Society. Permission has been secured from the authorities at the barracks to arrange the exhibit, but

since no tent or other space is available, the Public Health League has decided to purchase a large tent for this purpose. The tent will be used later by the Public Health League for various other purposes, for instance, for the use of mothers with sick babies during the hot summer months; for housing exhibits of any of the component societies, etc. There will also be distributed at the barracks suitable pamphlets on social hygiene, and if arrangements can be made, illustrated lectures on the same subject will be given. The exhibit will be in charge of an attendant. This will be voluntary service contributed by the members of the Executive Committee of the Social Hygiene Society, and later, if possible, a paid attendant will be placed in charge.

Practically the same work as is being contemplated at the barracks is now being duplicated at the Great Lakes Naval Training Station near Chicago. The St. Louis exhibit will be duplicated and placed in a suitable place in a gymnasium. Pamphlets will be distributed and lectures given.

Because of the great prevalence of venereal disease in European armies, the public has been aroused to the dangers of the social evil at mobilization times and is demanding that something of this kind be done. The Missouri Social Hygiene Society therefore is concentrating its fire in this field.

H. E. K.

---

## PROCEED WITH CAUTION

There is a board on most of the railroad block signal systems which warns engineers to "proceed with caution." It signifies that danger lurks ahead which requires the exercise of more than the usual amount of watchfulness so necessary in railroad traffic. So we have headed this item with the caution signal in order to warn our members that there are elements of possible danger in the plan which an insurance company is advocating among our members to insure them in groups against suits for malpractice. Our Defense Committee has investigated this plan and has declined to approve it. Some of the county societies have been approached by the representative of the company for the purpose of inducing the county societies to adopt the plan. We suggest that any such scheme should be submitted to the Defense Committee before definite steps are taken by the county societies. Such action by the county societies would conserve the interest of the members and not in any way interfere with the promulgation of a worthy propaganda advocated by insurance companies.

## FOODS AND BEVERAGES ADVERTISED IN THIS ISSUE

"The state journals and *The Journal of the American Medical Association*," remarked a prominent member when discussing advertising recently, "are the only journals that I value when considering advertised articles."

The rapid growth of this sentiment brings fresh proof that the old adage "Truth must prevail" is sound. In this issue we print a bulletin on "Foods and Beverages," and list the firms advertising in this number who have articles of this character for sale.

We invite the interest of our members in this effort to attract their attention to those firms which endeavor to cooperate with us in conducting a clean and honest advertising propaganda.

---

## NEWS NOTES

BASE hospital unit No. 21 from the Barnes Hospital at St. Louis, has departed for the war.

DR. W. P. BRADLEY, Superintendent of State Hospital No. 3, Nevada, has been re-elected by the new Board of Managers.

DR. JOSEPH W. CHARLES of St. Louis has been reappointed a member of the board of managers of the Mo. School for the Blind. The term is for six years.

JUST as we are going to press we learn of the sudden death of Dr. L. A. Todd of St. Joseph. He had been to Kansas City for treatment of an ear trouble and died on an interurban car while returning to his home.

DR. W. J. FERGUSON of Sedalia, Councilor of the 19th District, has been appointed a member of the State Board of Health succeeding Dr. R. L. Wills, of Neosho, whose term expired. The term is for four years.

DR. D. C. THOMPSON of Ferguson, arrested and prosecuted by the government for violation of the Harrison Anti-Narcotic law, was found guilty in the United States District Court at St. Louis on May 10. His attorney gave notice that the case would be appealed.

DR. GEORGE H. JONES of Jefferson City, bacteriologist of the state board of health, has been appointed a member of the board and elected secretary. He will continue to act as state bacteriologist, the two positions being combined for economic reasons.

THE St. Joseph health authorities are experiencing the difficulty that other health officers have met when attempting to improve sanitary conditions of cities. It is said that many of the people in St. Joseph are ignoring the ordinance requiring outhouses to be connected with the city sewer.

AN amusing incident occurred at the Springfield session when a member of the committee sent by the G. A. R. to convey its greetings to our Association, earnestly advocated the coalition of our body with the Osteopaths; but he warned against any combination with the Christian Scientists.

DR. C. W. WATTS, Secretary of Howard County Medical Society, and his estimable wife celebrated the golden anniversary of their marriage on May 16. They have been residents of Fayette County for very many years and Dr. Watts has been Secretary of the Howard County Society ever since the reorganization of the Association.

THE St. Louis Medical Society has appointed a committee to push the prosecution of Jacob Stengal, the man who shot and killed Dr. Frederick L. Pohlmann, a member of the Society, on May 14. The Society voted to exhaust every proper means for prosecuting Stengal for murder, and if that charge failed to prosecute him for carrying concealed weapons.

SINCE April 1, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Abbott Laboratories: Parresine.

Howard-Holt Co.: Siomine.

Lehn & Fink: Aspirin, L. & F.

E. R. Squibb and Sons: Acetylsalicylic acid, Squibb.

General Chemical Co.: Sofos.

MAYOR KIEL of St. Louis has appointed Mr. John Schmoll Director of Public Welfare in place of Emil Tolcaz, whose term has expired. The Director of Public Welfare has charge both of the hospitals and eleemosynary institutions in the city. Mr. Schmoll has reappointed Dr. Max C. Starkloff health commissioner, a tribute which Dr. Starkloff has earned by his effective administration of the health department during the past eight years. The Director also announced the re-appointment of Dr. C. H. Shutt, Hospital Commissioner, which action will also meet with general approval. It is probable that no change will be made in the method of appointing the medical staffs of the hospitals.



DR. GEORGE P. PIPKIN, Superintendent of the General Hospital at Kansas City, has gone to New Mexico for a rest and recuperation of his health. Dr. Pipkin has been in the health service of Kansas City since 1902 and his breakdown is attributed largely to the hard service he imposed on himself in the discharge of his duties. He resigned his position as superintendent of the hospital but the health board refused to accept it and voted to give him an indefinite leave of absence.

THE Board of Managers of the State Sanitarium for tuberculosis elected Dr. E. C. Roseberry of Springfield, Medical Director, and Dr. S. A. Newman of Cassville, Superintendent. Two members of the old board, D. R. C. T. Dusenberry of Monett and Mr. S. H. Minor of Aurora were re-appointed. The other members of the board are L. E. Seneker of Mount Vernon, A. F. Collier of Mountain Grove and Dr. E. C. Roseberry of Springfield. Dr. Newman succeeds Dr. C. C. English as Superintendent and Dr. Roseberry fills the vacancy caused by the death of Dr. E. W. Schauflier of Kansas City.

Two men were arrested in Cape Girardeau on May 6, charged with swindling a sick woman out of \$100. One of the men posed as Dr. J. H. Young. His face was adorned with a heavy crop of whiskers, trimmed sidewise, and he wore the traditional silk hat of the traveling faker. With Young was a man giving the name of Henry Sherman who posed as Young's secretary. The woman they victimized is a chronic invalid who paid \$100 to Young when he agreed to cure her within ten days. Shortly after collecting the money the men prepared to leave town, but were arrested on complaint of a son of the sick woman.

THE need of a natural history museum for the city of St. Louis has long been realized, but for some reason no concerted effort has ever been made to establish such an institution. The loss, to our city, of the splendid herpetological collection of the late Julius Hurter, which was donated to the Smithsonian Institute of Washington, D. C., owing to the fact that St. Louis had no proper repository for it, induced some of the members of the St. Louis Naturalist Club to make an effort to prevent any further loss of local collections.

This resulted in the organization of the St. Louis Natural History Museum Association, which was founded on March 7, 1917.

This association is and will be absolutely non-political, its objects are as follows:

1. To encourage and develop the study of natural history.

2. To advance the general knowledge of kindred subjects, and to that end furnish popular instruction.

3. To establish and maintain a Natural History Museum and Library for the city of St. Louis.

Meetings are held monthly. The next meeting will be held at the Studio of Mr. Frank Schwarz, 1809 Lafayette Avenue, on Wednesday, June 13, at 8 p. m. At this meeting, Dr. Albert Kuntz, of the St. Louis University, will present a paper on "The Breeding Habits of Fishes."

The officers are: President, Mr. Herman Schwarz, 720 Clark Avenue, Webster Groves, Mo.; secretary treasurer, Mr. L. P. Jensen, Busch Place No. 4, City.

Meetings are open to the public, and the secretary will be pleased to furnish further information to any one interested in this new association.—*Bulletin*, St. Louis Medical Society.

THE organization of the St. Louis Public Health League took place at the Hamilton Hotel, Wednesday evening, March 28, 1917. Those present and the organizations represented were as follows:

St. Louis Tuberculosis Society: Dr. James Stewart, Mr. A. W. Jones, Jr.

Social Hygiene Society: Dr. Geo. R. Dodson, Dr. H. E. Kleinschmidt.

Prevention Committee of the Missouri Commission for the Blind: Mrs. Harris, Dr. W. H. Luedde.

Baby Welfare Visiting Nurses: Miss Emma Habnicht.

Prenatal Care and Social Service Dept. of Washington University: Miss Riddle.

Society for the Control of Cancer: Dr. Fred J. Taussig, Miss Blanch Renard.

Society for the Prevention of Heart Disease: Dr. G. Canby Robinson.

Committee on the Control of Syphilis: Dr. Martin F. Engman.

St. Louis Medical Society: Dr. Wm. Kerwin.

Central Council of Social Agencies: Mr. C. N. Hubbard.

Mr. Jones read the letter of call issued by the St. Louis Tuberculosis Society and requested Dr. Taussig to preside.

Dr. Taussig stated the purpose of the meeting and Mr. Jones stated what has been done along educational lines by the Tuberculosis Society, and explained the plan for the proposed public health.

After a general discussion, the following plan of organization was definitely adopted:

That each organization be requested to formally appoint one delegate, said delegates to meet on call of Mr. Jones, to perfect organiza-

tion and to operate the league for one year under the following plans:

1. *Name*.—The name of this organization shall be the St. Louis Public Health League.

2. *Purpose*.—The purpose of this League shall be to bring about cooperative effort on the part of the various associations and groups interested in public health work and the prevention of disease along the lines of public education, legislation and social service.

3. *General*.—(a) Each special organization or group shall continue to maintain a separate existence as it sees fit, to carry on such special legislative, preventive and other work that it may be interested in.

(b) All arrangements entered into by the various organizations and groups shall be tentative for the period of one year beginning April 1, 1917. Thereafter a more permanent organization may be perfected if found practicable.

(c) No relief work shall be included in the Public Health League program.

(d) The social service work of the League shall be directed along the lines of education, prevention and early recognition of disease.

4. *Organizations Eligible*.—During the said period of one year the organizations eligible shall be only medical charities and medical groups which do special work in the education of the public along health lines.

5. *Governing Body*.—(a) The governing body of the League shall be an Executive Board composed of one delegate from each of the organizations or groups which comprise the League, said body to elect its own president, vice president and secretary-treasurer from its own members. All officers to serve without pay.

(b) The president shall act as chairman.

(c) The board shall have the power to appoint as many subcommittees as is necessary to carry on the work.

6. *Character of Work*.—The League shall undertake the education of the public concerning the more important diseases and principally along the following lines:

(a) Health legislation, (b) public lectures, (c) distribution of literature, (d) special exhibits.

A. The educational work shall be conducted through a central bureau located in the offices of the St. Louis Tuberculosis Society and in charge of the administrative force of said society. Office rent and administration to be borne entirely by the Tuberculosis Society.

B. The Executive Board of the League shall act as such in the formation and operation of plans for conducting all work in connection with the League.

7. *Budget*.—The funds necessary to carry on this work shall be obtained through means satisfactory to each of the participating organizations.

The question of those eligible to membership was discussed, and on motion it was decided that the following organizations and groups be made members: St. Louis Tuberculosis Society, Social Hygiene Society, Prevention Committee of the Missouri Commission for the Blind, Society for the Control of Cancer, Committee on the Control of Syphilis, Baby Welfare and Visiting Nurses, Prenatal Care and Social Service Department of Washington University, St. Louis Medical Society, City Health Department.

The Executive Board was authorized to invite the cooperation of the universities and to secure the endorsement of the Chamber of Commerce, Control Council of Social Agencies, School of Social Economy, and other similar organizations and to increase the membership from eligible organizations.

## MEMBERSHIP CHANGES, MAY, 1917

### NEW MEMBERS

G. A. Auerswald, DeSoto.  
Nathan Barlow, St. Louis  
Buford M. Colby, St. Joseph.  
Albert R. Conrad, Caruthersville  
Henry A. Cox, Kingston.  
Marcus C. Damron, DeWitt.  
Joseph Davie, St. Louis.  
Chas. E. Fallet, DeSoto.  
Benj. E. Garrison, Kansas City.  
Albert N. Gray, Maryville  
George A. Kelling, Waverly.  
Ralph H. Major, Kansas City  
Roy H. Milligan, Kearney.  
James R. Mott, Grovespring.  
George A. Nieweg, Vancleve.  
John W. Nigh, Pattonsburg.  
John Z. Parker, Pattonsburg.  
T. P. Scott, St. Joseph.  
Lloyd Simpson, Columbia.  
William Jewel Smith, Paris.  
Robert Vinyard, St. Louis.  
Henry O. Whitten, St. Joseph.

### CHANGE OF ADDRESSES

L. C. Boisliniere, 3544 Washington Ave., to 3605 Lindell Ave., St. Louis.  
Lloyd H. Brannon, St. Louis to Hayti.  
A. J. Florian, 800 Rialto Bldg., to 520 Chambers Bldg., Kansas City.  
George W. Flynn, 3541 Park Ave., to Nicholas Bldg., St. Louis.  
Arnold W. Garlitz, Leavenworth, Kan., to Danville, Ill.  
R. L. Garner, Kansas City, to Milan.  
L. K. Guggenheim, Metropolitan Bldg., to 1006 Carleton Bldg., St. Louis.  
Rolla Henry, 2316 Russell, to 2026 S. Jefferson, St. Louis.  
Arthur W. Koessel, 2911 Gravois, to 3444 S. Grand Ave., St. Louis.  
John H. Lucas, Mendon to Brookfield.  
Cyrus P. McRaven, St. Louis to Jamestown.  
E. Lee Myers, 3904 Laclede, to 207 Wall Bldg., St. Louis.  
C. O'Connor, 825 E. 13th St., to 1416 E. 12th St., Kansas City.  
Edwin C. Peclor, Coal, R. D. Clinton, to Lorry City.  
James M. Potts, 219 South St., to 318½ College St., Springfield.  
F. W. Rathbone, St. Joseph's Hospital, to 425 W. 58 Terrace, Kansas City.



George R. Stevenson, 3305 Mitchell Ave., to 3303 Mitchell Ave., St. Joseph.

Quincy A. Tipton, Cottonwood Point to Caruthersville.

W. T. Todd, Guymon, Okla., to 20 West 2d St., Liberal, Kan.

F. T. Van Eman, Argyle Bldg., to 801 Rialto Bldg., Kansas City.

Malcolm L. Wood, Palmyra to Hannibal.

V. V. Wood, 4960 Laclede, to 301 Times Bldg., St. Louis.

J. A. Wren, Mexico, to Sturgeon.

#### REINSTATED

Frank D. Gorham, St. Louis.

David R. Griffith, Creighton.

B. F. Jones, Rives.

Elmer F. Kearney, Oregon.

C. V. Mosby, St. Louis.

L. H. Wallen, Summerville.

Richard H. Watson, Grandin.

Edgar E. Whiteside, Greenville.

#### TRANSFERRED

Joseph A. Hansler, San Antonio., to Texas Medical Society.

#### DROPPED

T. H. Casey, Lebanon.

John W. Conard, Pharr, Texas.

N. E. McAlister, Joplin.

Chas. W. Metz, Denver, Colo.

H. E. Songer, Kansas City.

#### DECEASED

O. L. Castle, Kansas City.

I. G. W. Steedman, St. Louis.

## MISCELLANY

### ADULTERATED ARNICA

The officials in charge of the enforcement of the Food and Drugs Act report that the examination of recent importations labeled as "Arnica" flowers has revealed in some instances another product having the botanical name of "*Inula britannica* L." has been substituted for the authentic arnica. This substitute is not recognized as official in the United States Pharmacopeia and so far as the officials know is not recognized as official in the Pharmacopeia of any other country. The Department of Agriculture will recommend the exclusion from the United States of shipments offered for importation as "Arnica" flowers which consist wholly or in part of the adulterant "*Inula britannica* L." since "*Arnica montana*," which is the botanical name of the authentic arnica, contains active principles which are not found in the substitute.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.  
Webster County Medical Society, Dec. 6, 1916.  
Platte County Medical Society, Dec. 8, 1916.  
Cape Girardeau County Medical Society, Dec. 15, 1916.  
Livingston County Medical Society, Dec. 16, 1916.  
Madison County Medical Society, Dec. 17, 1916.  
Carter-Shannon County Medical Society, Dec. 20, 1916.  
Atchison County Medical Society, Dec. 26, 1916.  
Linn County Medical Society, Dec. 30, 1916.  
Clark County Medical Society, Dec. 30, 1916.  
Benton County Medical Society, Dec. 30, 1916.  
Chariton County Medical Society, Jan. 1, 1917.  
Schuyler County Medical Society, Jan. 5, 1917.  
Crawford County Medical Society, Jan. 9, 1917.  
Adair County Medical Society, Jan. 10, 1917.  
Dent County Medical Society, Jan. 10, 1917.  
Mississippi County Medical Society, Jan. 16, 1917.  
Camden County Medical Society, Jan. 23, 1917.  
Barton County Medical Society, Jan. 30, 1917.  
Scott County Medical Society, Feb. 13, 1917.  
Cooper County Medical Society, Feb. 21, 1917.  
Gentry County Medical Society, Feb. 28, 1917.  
Marion County Medical Society, March 1, 1917.  
Ralls County Medical Society, March 13, 1917.  
Perry County Medical Society, March 20, 1917.  
Ste. Genevieve County Medical Society, March 27, 1917.  
Reynolds County Medical Society, March 30, 1917.  
Polk County Medical Society, April 7, 1917.  
Pike County Medical Society, April 11, 1917.  
Howell County Medical Society, April 17, 1917.  
Cass County Medical Society, April 18, 1917.  
Sullivan County Medical Society, April 20, 1917.  
Ray County Medical Society, April 25, 1917.  
Taney County Medical Society, May 1, 1917.  
Vernon County Medical Society, May 10, 1917.  
Dade County Medical Society, May 12, 1917.  
Holt County Medical Society, May 14, 1917.  
Carroll County Medical Society, May 23, 1917.

### ST. LOUIS MEDICAL SOCIETY

#### \* Meeting of the General Society, April 21

The meeting convened at 8:40 p. m., Dr. Albert H. Hamel presiding. The minutes of April 14 were read and approved.

Dr. Roland Hill presented a case of Von Recklinghausen's disease with complicated sarcoma of the soft tissues of the left upper arm. Discussion by Dr. Leo Rassieur.

Dr. Miles B. Titterington introduced the guest of the evening, Dr. H. K. Dunham of Cincinnati, Ohio, who read a paper entitled, "A Study of Tuberculous Lung Lesions as Revealed by the Roentgen-Ray Plate and Their Value in Physical Diagnosis."

Discussion opened by Dr. L. C. Boisliniere, and continued by Drs. Jacob J. Singer, J. Curtis Lyter, Edward H. Kessler, Edwin C. Ernst and Miles B. Titterington; Dr. Dunham closing.

Dr. Hamel presented an oral report on the appointment of the medical defense committee.

The secretary read a letter from the Chamber of Commerce requesting the society to aid it in an endeavor to unify and coordinate all organizations and

all patriotic activities to the end that practical patriotism may result.

It was moved that the hearty cooperation of the St. Louis Medical Society be extended to the Chamber of Commerce and that the matter of arranging for a speaker be referred to the Program Committee.

Dr. Malcolm A. Bliss presented the following resolution which was adopted:

THAT, Universal Training is an obligation the government owes to its citizens inasmuch as we have now and have always had universal liability to service.

THAT, We believe in the administration measure for selective conscription as the only means fair and just to all in a democracy by which to raise a sufficient force for the protection of the country and at the same time to keep organized the industries of the country to the end that the fighting forces shall be properly supported and the folks back home properly cared for.

THAT, A copy of this motion, signed by the president and secretary of this society be sent to each congressman from St. Louis and to each senator from Missouri.

Dr. R. Emmet Kane presented the following resolutions which were unanimously adopted:

WHEREAS, Congress has declared that a state of war exists between the United States and Germany, be it

*Resolved*, That any member of the St. Louis Medical Society now or hereafter engaging in military or naval service with any power in war against the United States shall be deemed to be an alien enemy and thereby forfeit his membership in the society.

It was moved that a copy of these resolutions be sent to the Chamber of Commerce. Carried.

Dr. Major G. Seelig reported that applicants for the Officers' Reserve Corps of the United States Army may now apply to a local examining board which has just been appointed.

Attendance 216.

#### Meeting of April 28

The meeting convened at 8:35 p. m., Dr. Albert H. Hamel in the chair. The minutes of March 21 were read and approved.

The scientific program consisted of the following: Symposium on the endocrine glands.

A paper entitled "Interrelationship of the Endocrine Glands," by Dr. Llewellyn Sale.

A paper entitled, "Pituitary Glands," by Dr. Ernest Sachs.

A paper entitled, "Physiology of the Adrenals," by Dr. Don R. Joseph.

A paper entitled, "Thyroid Glands," by Dr. Charles H. Neilson.

Discussion by Dr. George Richter.

The chair read letters sent by him and the secretary to the St. Louis Auxiliary Medical Defense Committee setting forth their reasons for declining the appointment to the St. Louis Auxiliary Medical Defense Committee. He also read the replies from the committee accepting their declinations and requesting the St. Louis Medical Society to appoint two members to take the positions they declined.

Discussion by Drs. Llewellyn Sale, R. Emmet Kane, Theodore P. Brookes and Norville Wallace Sharpe.

It was voted that the society sustain Dr. Hamel in his selection of the original committee and that the original committee consisting of Drs. Robert M. Funkhouser, Robert E. Schlueter, R. Emmet Kane, Charles H. Neilson and William E. Leighton be confirmed to coordinate all the society's activities in the matter of national defense.

It was further voted that the society petition the St. Louis Auxiliary Medical Defense Committee to

cause an investigation to be made of the charge that the country's request for medical aid had been taken advantage of by members of the state committee to vent personal feeling against the members originally appointed by Dr. Hamel and that if this investigation, reported back to the society, was satisfactory the president and secretary be requested to serve as representatives of the St. Louis Medical Society in the St. Louis Auxiliary Medical Defense Committee.

On motion the by-laws were suspended and Dr. Henry Kennon Dunham was elected to honorary membership.

Attendance 186

#### Meeting of May 5

The meeting convened at 8:40 p. m., Dr. Albert H. Hamel presiding. The minutes of March 28 were read and approved.

Dr. Louis H. Hempelmann introduced the guest of the evening, Dr. Alexius M. Forster of Cragmor Sanitarium, Colorado Springs, Colo., who read a paper entitled "Artificial Pneumothorax in the Treatment of Tuberculosis," illustrated with lantern slides.

Discussion opened by Dr. John L. Tierney and continued by Drs. Louis C. Boisliniere, Lawrence Schlenker, Jacob J. Singer and Louis H. Hempelmann; Dr. Forster closing.

Mr. James R. Dunn, chairman of the Americanization Committee of the St. Louis Chamber of Commerce, addressed the society on "The Standard Prescription for American Citizenship."

It was moved that a rising vote of thanks be extended Dr. Forster and Mr. Dunn for their interesting and instructive addresses. Unanimously carried.

Dr. A. G. Pohlmann announced the formation of a St. Louis Natural History Society.

Attendance 116.

#### Meeting of May 12

The meeting convened at 8:35 p. m. Dr. Albert H. Hamel presiding. The minutes of May 5 were read and approved.

The scientific program consisted of the following:

Tests for Cardiac efficiency, Dr. Warren F. Elmer. The Heart in Acute Infectious Diseases, Dr. Phelps G. Burford. The Roentgen Ray Interpretation of Dissections of the Heart and Aorta, Dr. Miles B. Titterton.

Dr. Joseph Grindon introduced the following resolution:

"The members of the St. Louis Medical Society, having learned with keen regret of the illness of their honored fellow-member, Dr. LeGrand Atwood, express their heartfelt wishes for his early recovery, and their hope that he may soon again appear among them, whom he has so often inspired, not only by his eloquent words, but still more by his life and the exemplification of his lofty principles as a practitioner, a citizen, and a man."

This resolution was unanimously adopted.

Attendance 104.

J ALBERT SEABOLD, M.D., Secretary.

#### APPLICANTS FOR MEMBERSHIP

Any member of the society who knows a good and sufficient reason why anyone of the following applicants is not eligible for membership in our society is requested to communicate at once with the Membership Committee.

Thomas B. Butler, 229 Frisco Bldg. Sponsors: J. Louis Swarts, Robert Hyland.

William F. Simon, 1115 Victor St. Sponsors: John D. Gaul, Edwin J. Schisler.

George F. Rendleman, City Hospital. Sponsors: Cyrus E. Burford, Helmuth H. Kramolowsky.

Ralph E. Niedringhaus, 2114 Railway Exchange Bldg. Sponsors: R. Emmet Kane, Edwin D. Edwards.



# WASHINGTON UNIVERSITY MEDICAL SOCIETY

Forty-First Meeting, March 12, 1917

## 1. EXHIBITION OF CASES.

### A. A CASE OF POLYCYTHEMIA.—By DR. DREW W. LUTEN.

A woman aged 52; in hospital because of cardiac decompensation. Reddish color of hands and feet noted. Red blood cells today 7,200,000; hemoglobin 105. Spleen three fingers breadth below costal margin. Records four and a half years ago showed red blood cells 9,000,000; hemoglobin about 100, at which time there was no decompensation.

### B. A CASE OF ANEURYSM.—By DR. E. R. SCHMIDT.

Patient, male, 76 years old, came into hospital Feb. 2, 1917, complaining of rheumatism, pains in the left hip and knee; also pain over the sternum which became worse on deep breathing. The pain in the left hip which radiated down to the knee, began Nov. 7, 1916. Patient was able to work for a few weeks but on account of the pain has been in bed off and on since. About Jan. 28, 1917, a small tumor appeared in the mid-sternal region. This has increased in size gradually and has been quite painful, the pain radiating over the precordium. He has been failing in strength, and has been unable to use his left leg for about two weeks before coming to the hospital.

Examination showed many telangetic spots scattered over chest and limbs, but no history of onset. In the mid-sternal region there was a tumor mass about 5 cm. by 2 cm. lobulated, which pulsed synchronously with the apex beat. The sac felt thicker than could be explained by the layers covering the sternum. No definite expansile pulsation made out. A fine needle was inserted and bright red blood was withdrawn. Patient was able to flex the left leg but was unable to extend it. No limitation to passive motion. Pain in the hip on movement, but no signs of a fracture. Rectal examination negative. Skiagram of the chest showed some dilatation of the heart and aortic arch. On fluoroscopic examination no definite connection was seen between the heart and the pulsating tumor mass anterior to the sternum. At the base of the heart the heart shadow and the sternum merged, but no connection could be positively made out. Wassermann negative. Plate of the pelvis showed extensive destruction of the left iliac bone with a partial fracture of the acetabulum. This was considered as probably malignant because no signs of tuberculosis were found and the Wassermann was negative. No primary focus was found. The patient gradually became worse, had involuntary stools and urine, developed a lobar pneumonia and died March 6, 1917. No autopsy. Immediately after death it was possible to express all the blood out of the tumor mass which had increased somewhat in size. Along the left border a sharp edge could be felt just as though the sternum had been eroded away. A plaster cast of the chest was shown on which the tumor could be seen.

The case is interesting because there was no primary focus found for the process in the ilium, nor was there a definite connection demonstrated between the heart and its vessels, and the pulsating tumor over sternum.

### 2. UTERINE PROLAPSE IN A CHILD.—By DR. W. C. POLLOCK.

In a colored girl of 13, an almost complete prolapse of the uterus was found, which had existed for more than five years. Patient began menstruating seven months prior to her admission to the hospital,

and had been a prostitute for about the same length of time.

On examination the patient presented, in addition to the genital prolapse, a number of developmental anomalies, such as scoliosis, infantile pelvis, bilateral genu valgum, high-arched hard palate and atrophic levator ani muscles; she furthermore had gonorrhea. Wassermann was negative.

After preliminary treatment for gonorrhea, the following operation was performed: First, anterior colporrhaphy; second, perineorrhaphy; third, laparotomy. After opening the peritoneum, both tubes were found to be infantile and containing pus. The culdesac was abnormally wide and deep, and contained the greater part of the small intestines, as well as the cecum and the sigmoid, both of which had very long mesenteries.

The culdesac was completely obliterated by sewing the opposing peritoneal surfaces to one another, thereby preventing the intestines from reentering the culdesac. Both tubes were resected, and the appendix removed. Convalescence was uneventful and after three months the postoperative results were found to be excellent.

Genital prolapse in children must be considered a partial symptom of infantilism. The patient presented numerous stigmata, which have been enumerated above. Similar findings were observed in other cases cited from literature. The operative treatment carried out in our case holds out a promise for permanent success. It should be supplemented by organotherapy and an appropriate hygienic regime.

### 3. THE LYMPH FLOW IN NERVES.—By DR. L. B. ALFORD.

This work was undertaken in the hope of corroborating and amplifying the results of Orr and Rows, Homen and Laitinen, Guillain, and others who found experimental evidence for the conclusion that bacteria, toxins and certain inert substances were carried up the nerves to and into the spinal cord by means of an ascending lymph stream in the nerves. The hypothesis has been advanced by these authors that in tabes dorsalis, paresis, and certain cases of ascending neuritis and of myelitis the toxic or infectious agent is conveyed to the site of the lesion in this lymph stream.

In these experiments iron salts, a solution of fuchsin, india ink, turpentine, and suspensions of several species of bacteria were used. Injections of graded amounts were made into the large trunk of the sciatic about the middle of the thigh in rabbits, with a hypodermic syringe. After various intervals of time the animals were killed and the tissues examined in the gross and whenever possible microscopically.

It was found that by the force of the injection alone very small quantities (0.01 to 0.02 c.c.) of the substances used could be carried into the spinal roots, and subdural and subarachnoid spaces. No evidence of the existence of an ascending lymph stream was obtained.

Previous experimenters evidently have overlooked this mechanical factor in explaining their results. This and not an ascending lymph flow will account for their results in most if not all instances.

## DISCUSSION

DR. SIDNEY I. SCHWAB: I think this work of Dr. Alford's is important, although its conclusions are negative. It does, however, somewhat shake our belief in the theory of degenerative changes in the cord which had seemed to be positively proven by the work of Orr and Rows which Dr. Alford has quoted. It may be recalled by those who know that work that in seven clinical cases of peripheral infection degen-

crative areas were found in the spinal cord. The most striking one of these was an infection of the axilla in which the brachial plexus was bathed in pus. The patient died and on examination of the cord areas of degeneration were found in its higher segments. There were six other clinical cases, two of bedsores in the sacral region, one of some abdominal infection, and in all these cases examination of the spinal cord showed degenerative areas above the level of the place where the peripheral nerves came off. It was assumed, therefore, by these two workers that the only possible means of carrying infection from the source of primary focus was along the peripheral nerves to the cord, and they assumed that the infective agent is carried by the ascending lymph stream, which runs along the sheath of the nerves until it reaches the posterior portion of the spinal cord, carrying with it the infective material, whether toxin, bacteria, or whatever it was. This was the first paper and was largely clinical. It was succeeded by a number of experimental papers, some of which Dr. Alford has mentioned. The gelatin capsule containing organisms was placed on the sciatic nerve and degenerative areas of the spinal cord above that level were found.

The theory has been practically accepted in the recent literature and one hears of various debates in the neurological society, etc., on the subject. It is accepted as true that there is an ascending lymph stream, by means of which infective material is carried into the spinal cord. It has been suggested, furthermore, that a number of infectious processes, anterior poliomyelitis for one, can be explained by this process; and I think, as I said in opening my talk, that this negative result which Dr. Alford has gotten is of great importance and his explanation that, instead of there being a constantly ascending lymph stream, the infection of toxic material is diffusible or is carried along by means of the initial pressure in the stream is a very striking explanation.

There are several things which occur to one as possibly additional proof of this statement. In a number of alcoholic experiments which Dr. Allison and myself did some years ago, it was found that injection of alcohol in a nerve produced an intense flaccid paralysis of the muscles supplied by that nerve so quickly that it was almost impossible to think of it being carried along in the stream. Apparently it is by some diffusible process, the exact nature of which is problematical, that these things are carried along, and this seems to offer, perhaps, some explanation of very curious spinal cord conditions in peripheral lesions.

Some of Dr. Alford's slides are very striking, particularly grouping of pigment granules around the place where the initial lesion of tabes is supposed to take place. I think the work may be continued from that point of view with very favorable results.

#### 4. THE RELATION OF APICAL TUBERCULOSIS OF ADULTS TO THE FOCAL TUBERCULOSIS OF CHILDREN.—By DR. EUGENE L. OPIE.

In the former communication tuberculous foci in the lungs of adults associated with the tuberculosis of the regional lymphatic nodes were shown to have their origin in childhood. Focal lesions which heal are found at all ages after the second year of life but in more than half of all individuals these lesions are acquired between the ages of 10 and 18 years. Tuberculous infection of the lungs, of the regional lymphatic nodes or of some other organs of the body such as the gastro-intestinal tract and its lymphatic system is nearly universal but, doubtless, a few individuals escape.

Apical lesions of the lung make their appearance in later childhood and occur with increasing fre-

quency from adolescence to old age when half of all individuals exhibit apical tuberculosis. After the second year of life focal tuberculous lesions occurring in situations other than the apices of the lung tend to heal and after the tenth year focal lesions are almost invariably encapsulated and latent or entirely healed. Fatal tuberculosis after the tenth year is, with few exceptions, apical in origin.

In a series of fifty autopsies on adults apical lesions of the lungs in individuals previously infected with tuberculosis (nine instances) have, with one exception, pursued a chronic course and encapsulated by fibrous tissue have remained limited to the extreme apex of the lung. In one instance in a woman with advanced malignant disease, chronic pulmonary tuberculosis with abundant formation of fibrous tissue has been progressive.

A small group of instances of fatal pulmonary tuberculosis has indicated that apical lesions in those who have not undergone previous infection may assume an unusually severe character. In one instance apical tuberculosis followed by tuberculosis of the thoracic duct with disseminated miliary tuberculosis was unaccompanied by preexisting tuberculosis and was associated with fresh tuberculosis of the regional lymphatic nodes. In this respect the lesion resembles a fresh infection such as occurs in animals previously uninfected. Apical tuberculosis in individuals with preexisting focal tuberculosis is unaccompanied by tuberculosis of adjacent lymphatic nodes and resembles infection produced in an animal which is already tuberculous.

The following observations indicate that apical tuberculosis of adults is not a sequence of infantile tuberculosis but is caused by subsequent infection: (a) Apical tuberculosis is more common in later life when the focal lesions of childhood have in most instances completely healed. These apical lesions pursue a chronic course and are discovered at autopsy in individuals who have died from other diseases. (b) The focal lesions which acquired in childhood are found in the lungs of adults with apical lesions are usually completely healed and firmly calcified whereas the accompanying apical lesion is, in most instances, relatively fresh and caseous. (c) In many instances of focal and apical tuberculosis the focal lesion is in one lung whereas the apical lesion is situated in the opposite apex. This relation contradicts the view that the tuberculous lesion is transmitted from the preexisting lesion to the apex by way of lymphatics.

#### 5. FURTHER OBSERVATIONS ON THE MECHANISM OF THE ARTERIAL COMPRESSION SOUNDS OF KOROTKOFF. THE PREANACROTIC PHENOMENON — WITH DEMONSTRATION.—By DR. JOSEPH ERLANGER.

In records of the pulsatile movement of the walls of an artery in animals made while and where the artery is being slowly and steadily decompressed as in making blood pressure observations in man, a series of small waves, running mainly below the median position of the wall, is seen immediately ahead of the anacrotic limb of the pulse. These waves, together with the attendant changes in the form of the pulse, we have designated the *preanacrotic phenomenon*. The phenomenon is apt to be fully developed only in the distal parts of the compressed segment, and may be wholly lacking in the proximal parts. It appears in the distal portions of the segment when, during decompression, the pulse there begins to write a distinct anacrotic limb. At this time the record gives evidence of a residuum of blood in the artery between pulses. Korotkoff sounds first become audible in the artery peripheral to the chamber with, or shortly after, the appearance of the



phenomenon at the lower end of the compressed segment. The waves of the phenomenon then increase in amplitude and complexity, but wholly disappear, usually with the greatest of abruptness, with the very first of the fourth sound-phase pulses, and when, or very shortly after, the artery first remains full but undistended at the end of diastole. The anacrotic limb of the pulse is steeper in the peripheral than in the central parts of the compressed segment. The phenomenon is propagated along the course of the peripheral artery.

The phenomenon has been studied in a model, the principal part of which consists of a tube about 1 meter long rolled from very thin rubber dam. When pulses are sent through this tube, filled to a medium depth with water to the total exclusion of air, and records of the pulse are taken at short intervals along its length, the following results are obtained:

The steepness of the anacrotic limb at first steadily increases. At about 10 to 12 cm. a preanacrotic negative wave begins to form. This wave deepens and shortens and at 15 cm. begins to develop in front of itself a positive wave, which also grows and eventually develops in front of itself another negative wave. At 19 cm. the first negative and positive waves come to lie well up in the anacrotic limb of the pulse. This process then repeats itself over and over again to the very end of the tube. But where the tube is scarcely stretched by the pulse, 40 or 50 cm., the waves no longer pass up into the anacrotic limb but are propagated in advance of the pulse, constantly forming and therefore constantly increasing in number. These smaller waves evidently are *ripples*. Their disappearance in the anacrotic limb of the pulse is due to the faster propagation of the pulse. Exactly the same phenomenon is seen in the artery *in situ*.

Sharp, snapping sounds can be heard in the parts of the tube through which the *ripples* pass; and at any given point they correspond in number with the number of *ripples* formed up to that point. The position at which *ripples* begin to form is under all circumstances the position at which the sounds first become sharp. As the artery is filled with water this position moves downward. At a degree of fulness that is produced by a pressure of only 1 to 3 mm. Hg ripple formation ceases and such sounds as can be heard are dull everywhere.

## THE SURGEONS CLUB OF ST. LOUIS

Meeting of Oct. 18, 1916

### HEMATOCOLPOS, HEMATOMETRA, AND HEMATOSALPINX IN A WOMAN OF 74 YEARS.—By DR. GEORGE GELLHORN.

In a woman of 74 years who had menstruated normally until thirty-five years previously, severe pain pointing to obstruction of the urinary flow led to the detection of a large fluctuating tumor which filled the entire pelvis and extended upward almost to the umbilicus. The vagina was occluded by senile atresia. Laparotomy in spinal anesthesia revealed the tumor to be an enormous hematometra and hematocolpos with bilateral hematosalpinx. Panhysterectomy was performed successfully and the tumor, which was connected with the vagina only by loose connective tissue, was removed unopened out of its bed. Convalescence was undisturbed; the patient left the bed on the twelfth day after operation but succumbed to an embolism on the fifteenth day. The cause of bleeding into the occluded genital tract was an adenocarcinoma of the body of the uterus.

Accumulation and retention of blood in the genitals of women past the menopause is very rare, and the

few reports existing in literature were reviewed by the essayist. Only one case has been recorded which is somewhat similar to the one here presented. Considering, however, the extreme old age of the patient, the extent of retention of blood, the anatomic condition of the lower pole of the tumor and the *modus operandi*, the present observation occupies a unique position in literature.

## DISCUSSION

DR. WILLIAM E. LEIGHTON: I was present at this operation, and not only was the diagnosis of the tumor and the cause of the tumor interesting, but the anesthetic, which, as he mentioned, was spinal anesthesia, was most satisfactory and worked beautifully all the way through. I was there ready to give either anesthesia, if necessary, but there was no occasion for it, as the doctor said. The pulse was good all the way through, the patient's general condition was fine. We talked to her all through the operation and she seemed quite as unconcerned as any one in the room.

DR. JONAS: Was it novocain?

DR. LEIGHTON: Yes.

DR. ERNST JONAS: What do you think of the very great frequency of those adhesions in the vagina and the not rare occurrence of carcinoma of the body of the uterus in old age? It is rather unlikely that cases of this kind are comparatively rare. You would imagine that they ought to occur with great frequency. Carcinoma of the body of the uterus in old people is frequent and adhesions are certainly frequent, even fairly complete adhesions, in advanced years.

DR. LEIGHTON: The tubes do not stand out as plainly as they did at operation.

DR. GELLHORN: No, I broke one. We could not put the volsella into the uterus so we had to pull on the tubes and one was broken.

### POLYPOSIS UTERI.—By DR. GEORGE GELLHORN.

The patient was a tabetic woman, 40 years of age. She was first seen in February, 1916, when the genital findings were normal with the exception of a slightly enlarged left ovary. Four months later the picture had changed decidedly. She had an abundant uterine bleeding which had persisted for the last four weeks in spite of energetic styptic treatment. Both adnexa were changed into tubo-ovarian cysts the size of large hen eggs. Abdominal panhysterectomy was performed and on opening the uterus a dark red, bloody tumor was found which had its origin from the endometrium throughout the entire extent of the uterine cavity. Its lower pole, which was the only part of the tumor not attached, had wedged itself into the cervical canal and dilated the latter. It terminated in a tail-like extension which reached to about the external os. The consistency of this tumor mass, which corresponded to about the size of a walnut, was spongy and it showed a fibrillary arrangement. There was no sharp line of demarcation between the tumor and the deeper layers of the endometrium whence it originated.

The appearance of this intra-uterine tumor was so utterly unlike any specimen, picture, or description I had ever seen that I undertook the microscopic study of the sections with a great deal of expectation. Strangely enough there is nothing in the histologic pictures that is different from those of mucous polypi. Polypi of the uterine mucosa represent a local exaggeration of a hyperplastic condition of the mucosa. The latter is thickened everywhere and here and there the polypi may be seen protruding from the rest of the endometrium. These polypi may be single or multiple, but in no case described has the condition been as universal and as extreme as in the specimen presented. We may then classify this growth as a particularly intensified form of universal polyposis uteri.

## DISCUSSION

DR. JOHN YOUNG BROWN: Why was the diagnosis of tabes made?

DR. GELLHORN: She has the typical signs of tabes. She returned a few weeks ago for another course of salvarsan and can walk now, the tabetic symptoms having disappeared.

DR. M. G. SEELIG: How can you make diagnosis of a polyp?

DR. GELLHORN: The definition of a polyp is a hyperplasia of the existing mother tissue.

DR. SEELIG: With the base substance to it. Does that show it?

DR. GELLHORN: Yes. I did not bring it with me. There is shown the uterine stroma of the endometrium, only enormously increased, and the glands are tremendously pulled out; yet the epithelium of the glands is perfectly normal. There is no sign of malignancy and the outermost portion of the mass is just the ordinary stroma filled in all the spaces with blood corpuscles.

DR. LEIGHTON: Did she have any eruption on the body?

DR. GELLHORN: No.

# REPORT OF A CASE OF GAS BACILLUS INFECTION.—By DR. F. W. BAILEY.

The case was a coroner's case, due to the fact that the man had suffered a very severe injury and the insurance company demanded a coroner's examination. I present it briefly to obtain discussion, especially from those gentlemen who have had the benefit of experience with acute gas bacillus poisoning in Europe, and, secondly, because it is new in my experience. For thirteen years I have been closely associated with hospitals, both city and otherwise, and I have been closely associated with and worked on many compound fractures where you would expect a gas bacillus infection to have its origin, and never before have I had a case of this kind.

The patient was injured on Saturday and sent into the hospital Saturday night. He had been under the care of a physician for about four hours. He had fallen from a treetop into a creek bed about 25 feet below. There had been a tremendous amount of bleeding but no definite sign of internal injury. There was a very severe compound fracture about 3 inches above the ankle. When he was picked up the tibia was protruding and sticking into the ground some 2 or 3 inches. It gave evidence of having been peeled back to that extent and was covered with foreign material even when he was brought into the hospital. They had made an effort to wash it off but had put nothing into the wound. Both bones were comminuted. Tourniquet had been applied.

Bleeding points were located and ligated; the wound was cleansed as much as possible and 3 per cent. iodine poured in freely. I put in all the drainage it could stand, opened the wound further, trimmed off the ragged edges, and put the patient in temporary splint and gave him antitetanic serum. It is my custom in these cases, where possible, to give continuous irrigation until the time for infection is virtually past, but the circumstances made such procedure impracticable.

He gave no signs of any untoward progress on Sunday evening. His temperature never rose above 102 and that occurred within four hours after the injury; after that it dropped to 99 and on Sunday evening was 100. At that time I made arrangements to anesthetize him and put the leg in a more satisfactory splint where it could be better observed. But as I entered the room on Monday morning I detected a very peculiar odor of hydrogen sulphid. When I got near the bed the odor very evidently was coming from the wound where the drainage was estab-

lished and on exposing the leg I found the portion just above the case, which only extended to the knee in this temporary splint, using sandbags for the rest of the leg—slightly discolored and when I touched it with my finger I got a distinct crepitus.

We prepared immediately to operate him but they could not let us into the room for two hours, at which time the condition had extended up to the thigh and there was some slight evidence of it being up on the lower flank on the left side. On opening, we found an emphysematous condition, which seemed to begin about 4 inches above the fracture, extending up even slightly above the knee. The limb was considerably swollen and discolored. We made about twenty-five incisions of from 4 to 6 inches, and on every incision the gas would spurt out. There was no pus, no fluid of any kind. The patient was returned to bed and grew steadily worse, dying from what I thought was a systemic involvement of the infection.

I am very anxious to hear the opinion of those who have had occasion to handle these cases in the East.

The clinical aspect was what struck me more than anything else. The night before he was cheerful, very low pulse, temperature 100, had been taking nourishment, seemed to be progressing as nicely as you could expect with an injury of that sort. When I entered the room the following morning, at 8 o'clock, the patient was absolutely yellow, a typical jaundice, and the facial expression was very grave indeed. I then, of course, began to feel that the infection had extended up and become more or less systemic.

## DISCUSSION

DR. LEIGHTON: There are several stages in the development of gas bacillus infection. Not all cases are virulent. The virulent cases usually develop about as Dr. Bailey has described this particular case, very rapidly. The onset may be acute or chronic; that is, it may be within twenty-four hours after wounds are received, or it may be delayed several days and then run a course just about as the doctor has described. Unfortunately, most of these cases begin insidiously, and gradually go from bad to worse, if they are not properly handled. When you get these severe cases, they almost always present a picture of septicemia and it is rare that you save one of that type.

You may be able to get a blood culture showing the gas bacillus present in the blood, but it is rather difficult to get that. There are only a few cases that are really authentic where it has been found. However, immediately after death you will find the gas bacillus in every organ; you cannot get a body to the autopsy room quickly enough to find an organ that is exempt from the bacillus. Yet antemortem it is almost impossible to find the gas bacillus in the blood culture.

The mild and slowly developing type of gas bacillus infection you can do a great deal for, and it does not require the radical operation that we were taught was necessary when we were students. In my day it was: "When you find gas bacillus poisoning, amputate." And the patient always died. If he survived the amputation, it was always suggested to get above it and make a second amputation. I saw a number when I was a student and none of them got well.

In the war zone we spotted a good many of these cases where there was no evidence of crepitation to the feel by simply taking an x-ray picture for the foreign body and finding gas bubbles about the track of the vessel. If we operated, and we usually did when we found that, removed the foreign body and made adequate drainage, we always got a gas bacillus out of it. There was a stage in between where the man would have more or less gradual emphysema—not septic—mild temperature or possibly none at all;



and a few incisions, as Dr. Bailey used, would cure the case without trouble. In the worst stage, where the muscles are involved, it is necessary to break up the intramuscular spaces and to give the gas a chance to escape, or even to break up the muscle bundles because of the very destructive action of this organism on these bundles.

The most effective treatment was simply incision and drainage, without attempting to apply antiseptics of any sort. Hydrogen peroxid had no effect at all. The most severe case I had was a man who had emphysema extending from his ribs down nearly to his knee. I treated by simple incision, breaking up the muscles, and then injecting pure oxygen through a hypodermic nearly everywhere through that tissue. He had a temperature of 104 or 105 for two or three days, was thoroughly septic, delirious, but finally recovered. Whether recovery was due to the oxygen, I do not know.

It may be interesting to note that you do not find this infection in all parts of the war zone. Dr. Hagler never saw a case in Serbia. In Russian Poland there is a very small percentage of gas bacillus infection. Yet in France we can culture the clothing or the muscles that are removed, and in about 66.2 per cent. of cases we will find the evidence of gas bacillus infection. In some parts of France they almost always culture it. On my service we found the percentage from the wounds tallied with the percentage from the cultures of the bullets.

France is intensely cultivated. They use not only the animal manure but the human manure for fertilizing the ground. Whether that has anything to do with it I do not know, but probably the intense cultivation has some bearing on the question. It has been suggested that this particular section has been the battlefield of the world for generations and probably by these present operations new organisms are brought to light from former strife.

DR. BAILEY: I learned after the death of this man that the creek bed into which he fell was used as a sewer.

ACUTE GANGRENOUS APPENDIX.—By DR. JOHN YOUNG BROWN.

The patient, a young man of 22 years, came to St. John's Hospital on June 8, 1915, with a history of having been ill for six days. On admission he had a rather well-defined appendicitis, and quite a widespread peritonitis.

I operated the day after his admission and found a gangrenous appendix with extensive peritonitis. I did the usual operation, ligating his appendix and putting a drain in his flank and one in his pelvis. He got along very nicely for five days when he developed a fecal fistula. Later the fistula closed. Thirteen days after the closing of the fistula he developed an acute intestinal obstruction. Operation was performed on the day after the obstruction developed, at which time he was vomiting and in very bad condition; I simply pulled up a loop of ileum from as near the ileocecal valve as I could and cut across the bowel, putting a tube in both proximal and distal ends of the bowel.

He made a very slow recovery and I operated on him for the restoration of his bowel continuity on September 9.

The obstruction was found to be due to a loop of ileum that had fallen down in the pelvis and become agglutinated there, bringing about the obstruction. I had no difficulty—there were very few adhesions; and I simply resected about 8 inches of bowel and made a lateral anastomosis, turning the distal bowel in to make a lateral anastomosis of ileum to ascending colon. I could not bring his cecum up. He has made an uneventful recovery, and his condition now is reasonably good.

My experience with obstructions of this type following appendicitis has been limited to three cases. Some years ago, Dr. Finney of Hopkins made a very elaborate report on cases of postoperative obstruction that occurred in the hospital in the ten years prior to the report, and I remember that at the time it impressed me that there was quite a tremendous percentage of cases of that kind.

The causes of this condition are due, I am convinced, to failure to get to the distal pathology of the case. When we find an appendix over the brim of the pelvis, 6 or 8 inches of small bowel down in the pelvis, bowel denuded of peritoneum, we shall encounter this trouble unless we liberate this bowel, remove the pathology, go to the distal pathology, lift the bowel out of the pelvis and properly place a drain so that it will not fall back.

In this connection, I would like to call attention to the value of the right-sided anus in treating obstructions in the lower colon and rectum. I recall six cases acutely obstructed by pathological growths in the lower sigmoid and rectum in which I have done the exclusion operation with excellent results. One of these cases was operated on two and a half years ago for a syphilitic stricture. Her bowel has been out of commission for two and a half years and she has an artificial anus on the right side with reasonably good control of the anus.

DR. GELLHORN: How do you feed those patients if you have the opening on the right side?

DR. BROWN: Through the mouth.

#### DISCUSSION

DR. SEELIG: You were careful to pick up a distended loop of bowel when you wanted to relieve the obstruction?

DR. BROWN: Yes.

DR. SEELIG: Now in that type of operation, what was the advantage of this double-barreled anus over a simple enterostomy? I can see the advantage when you want to put the colon out of commission, but do you think it is of particular advantage otherwise?

DR. BROWN: Not in this case because the obstruction was about 8 inches above the ileocecal valve; I was just following the custom I have. I thought the obstruction might relax there and I could then irrigate from this diseased bowel. But in the operation for closing artificial anus I encountered no disease at all.

DR. SEELIG: I am not clear also as to how much you resected.

DR. BROWN: I took out, I believe, 12 inches of gut.

DR. SEELIG: Why did you resect the loop when you went in the second time?

DR. BROWN: It was still adherent in the pelvis and I had to break up the adhesions.

DR. SEELIG: It was not viable, then?

DR. BROWN: No. It was not patent at all, though there were portions that were patent. I simply turned it in as you would purse string an appendix. The cecum was adherent. He had an old fecal fistula and a bad infection in the pelvis. I had to resect on account of the condition of the loop.

DR. JONAS: Referring to Dr. Brown's answer to Dr. Seelig's question, I had thought there was perhaps an advantage in Dr. Brown's procedure in this case in making a complete artificial anus in a far advanced case of intestinal obstruction, as he could wash out the bowel completely, which he could not do if he had just made a clean enterostomy and relieved the patient of the obstruction. But I was present at the last operation and there was no difficulty in getting into the free abdominal cavity, but when he attempted to bring out this large bowel many adhesions were encountered and when he tried to break them up he got quite an opening into the bowel.

Even without that opening, however, I am sure Dr. Brown would have resected the bowel because the bowel looked ragged and torn. In the hands of Dr. Brown the operation does seem extremely simple and it took only a very few minutes to do the closure of both ends of the bowel.

What struck me—and I have never done it but Dr. Brown said he has always done in closure of the small bowel—he just put the purse string suture around the bowel without sewing over the purse string again or without first putting a ligature into the crushed part of the bowel. He simply put in the purse string and pushed the cut ends of the bowel inside the purse string. I am always a little afraid that some distention might burst this bowel, but undoubtedly that is not the case, since Dr. Brown did not seem to worry about it one bit and I have seen the patient since again and again and he certainly made a very beautiful recovery.

DR. SEELIG: I would like to report a case that I had the pleasure of showing Dr. Brown the other day before I operated, where we had the most brilliant prospect of doing the exclusion operation that Dr. Brown has so strongly advocated of late. The case was a little child with Hirschsprung's disease with more marked abdominal distention than I have ever seen, so marked that on x-ray after bismuth meal the abdomen was just filled with shadow—nothing to be seen except colon outside of one little spot. But there occurred in that case what will always remain a mystery, because the child has died, unfortunately, and we did not get a postmortem. I brought out both ends of the ileum at the cecal junction and got a pretty free passage of gas and a rather marked spurting of feces at the time it was done, but not for one moment after the operation was done did the distention let down. Although we irrigated through the colon successfully and the irrigating fluid brought away a good deal of gas and a fair amount of feces, the distention persisted.

The child seemed to improve until the fifth day when suddenly the temperature and pulse went up and in a very few hours, died. Had the child lived the operation seemed to give prospect of doing just what we hoped for, namely, putting the colon out of commission for a reasonable length of time, letting the child build up and obtain several years of quietude on the part of the colon, and then offering the prospect of allowing us to go in and reestablish continuity. I had the privilege and pleasure of having Dr. Brown see the case before operation and we both thought much might be hoped for, but we were unable to obtain it.

I was strongly inclined, instead of doing the operation as we did, to bring out this loop of ileum, leave it out and pack it off and then at a later stage, possibly twenty-four hours later, simply divide it and avoid soiling. I had spoken to Dr. Brown of that and we decided on talking it over to be governed by the condition of the child, but unfortunately that was not possible, because after dividing this immense colon it was impossible to get it back without deflating and that might as well be done by dividing as by trochar wound. If you ever get a case of Hirschsprung's disease, do not deceive yourself by thinking that you can sew it up easily, for stitches will not hold in that tissue. Although supposedly a hypertrophic condition of the colon, if it lasts any length of time the atrophy is very pronounced. Although I had an extraordinarily flat, thin needle I could not pick up this serosa; I invariably made a penetrating stitch until just at the end, when I made closure.

DR. W. C. G. KIRCHNER: In regard to the case of acute gangrenous appendicitis, some of the gentlemen here will perhaps remember a case that we had at the City Hospital. I think three or four of the sur-

geons there had an opportunity to operate on him. He had the ordinary symptoms of appendicitis. Was operated on and made a good recovery and went to his home in Illinois. Later tumefaction took place at the site of the wound. He came back to the city. This wound opened spontaneously and a fecal fistula resulted. He fell into the hands of another of the visiting surgeons who made successful attempt to close the fistulous tract, but obstruction of the bowel ensued. He then, I think, fell into the hands of another surgeon who operated for the obstruction. Later on he fell to my service. By that time his abdomen was pretty cut up. He was greatly emaciated, in a perfectly miserable state, and he begged me to do something. His pulse was very quick, so under local anesthesia I made a quick anastomosis. That offered temporary relief but three or four days later he had another obstruction. I went in again and anastomosed the nearest portion of small bowel to the transverse colon. Of course there was left an opening or two that were a blind fistulae, but having made this perfectly clear tract for him, using a portion of intestine free of adhesions, he got along very nicely, improved and left the hospital. Dr. Klippel tells me that he returned and was in very good shape. That point is particularly interesting because I always wondered what is going to become of the ascending portion of the large bowel and the portion of the small bowel which led into blind fistulous tract. Of course no feces came through this portion after the last operation.

The point that Dr. Brown makes of the advisability of switching the current—obtaining these openings and later restoring continuity with favorable results reminded me of a peculiar thing. I have noticed with some of these cases that have been absorbing fecal material you might say for some time, that they stand these anastomosis operations better than clean cases. Perhaps they have an immunity in that respect. Our clean cases frequently die of peritonitis when they are infected in this way. The other cases do not seem to die quite so readily.

DR. SEELIG: Do you know what happened to that occluded bowel?

DR. KIRCHNER: He promised to come to see me. I hope he will. I should be glad then to report on the case. He still has two ends. I had hoped later on to remove that portion of the bowel.

DR. BROWN: There is one point I would like to ask Dr. Gellhorn about. It is, I think, a very interesting point. We find in these acute appendicitis cases, as I said before, where the appendix is over the brim—late cases—the small bowel is down behind the uterus and we liberate with ease the denuded peritoneal surfaces. Now the same condition is found in old, chronic pus tubes or old, neglected ectopic cases. I make it an invariable rule to repair, to lift the bowel up, to tie off the omentum and to suture the denuded area, but in the culdesac almost invariably you will leave a denuded area, and it has been my custom to use the old cofferdam drain of Price, lifting the small bowel up and inserting the drain from side to side. Coffey of Portland has recently devised a rubber patch for this. I have had no obstructions following cases of this type. Now what is your custom in that regard in an abdominal operation where you leave your appendix denuded?

DR. GELLHORN: I would rather take the uterus out than leave denuded surface.

DR. BROWN: Even if you take the uterus out and still have a denuded area?

DR. GELLHORN: Then I completely exclude the raw surface in the peritoneum by sewing the peritoneum of the bladder to that of the rectum.

DR. BROWN: Those through the vagina?

DR. GELLHORN: Yes, usually, but not always.



# DEMONSTRATION OF NEW METHOD OF SUTURE.—By DR. WILLIAM E. LEIGHTON.

I do not know that this is new, but it is an interesting little trick that may be of use to you some time. I showed it to one of the members and he said he did not remember having seen anything like it.

You often have a good deal of tension on sutures, especially if you do a continuous suture, and you feel that you would like to do an interrupted knot several times along that suture. It can be done very easily with only one extra turn of the needle where, as I say, you really want an interrupted suture. I have seen a case recently where the patient felt that something gave away and afterward she had a hernia. She had been sewed up in the ordinary appendix wound and she came back with a hernia, remembering when something seemed to give way. Suppose that it was a continuous suture, if one end breaks the whole thing is gone; your interrupted suture can only break by tearing out.

Now you start just as you do with any ordinary suture. You can run it with an ordinary glover's stitch over and over, or with an interlocking—it makes no difference. All you have to do is to catch it in and you have a square knot with just that one extra turn. That is your interlocking suture. The next will be the same thing, but instead of interlocking there is just one turn once all the way around and it will slip up. It is an interrupted suture on a continuous suture. You may put these interrupted sutures wherever you wish. It is a little trick, but you may save tearing out a wound or breaking an end of the suture. By this knot tied on a running suture, you may prevent the whole being spoiled. It can be done in bone surgery.

## Meeting of Nov. 15, 1916

# A CASE OF HODGKIN'S DISEASE.—By DR. O. H. ELBRECHT.

Patient, M. E., aged 53., had rheumatism about thirteen years ago, which seems to have been his principal previous illness. About three and a half years ago he noticed a swelling on the left side of the neck in line with the cervical chain of glands, but experienced no pain nor temperature corresponding to other glandular inflammations. Since then, glands have gradually increased in size. During this entire time he experienced no pain until about three weeks ago, when there was additional swelling. The right side showed no enlargement until about eight months ago.

Physical Examination: Bilateral enlargement of cervical glands, those on the left being the more extensive. Considerable induration involving mastoid process. Right side about the size of a hen's egg, being the more recent. It was very soft and almost suggestive of fluctuation. Principal glands on the left side and posterior to the ear slightly tender, and here too, there was a suggestion of inflammation. No axillary or inguinal involvement.

Dr. Harris made the blood examination and reports the following result: Wassermann reaction negative; differential count, white blood, neutrophilic 85 to 86 per cent., transitional cells 8 to 10 per cent., the remainder being lymphocytes. This shows relative increase in neutrophilic leukocytes and an absolute increase in transitionals.

From the increase in the proportion of neutrophilic cells, if Bunting's work is correct, the blood picture in this specimen corresponds to what we find in Hodgkin's disease, and the negative Wassermann strengthened this opinion.

The main features for which the man was operated were the pressure symptoms and the pain. He was commencing to experience some slight dyspnea owing

to the upper cervical involvement which went deep into the carotid sheath and put pressure on the pharynx. I had the man photographed at this time. He was operated on Feb. 10, 1916. Incision was made on the left side from the mastoid to the clavicle posterior to the sternal muscle. It later became necessary to increase the size of this incision and to cut across the sternocleidomastoid muscle. The glands were very tightly adherent to all the surrounding tissues, there being a great deal of adenitis which was more extensive on the old side and firmly fixed to the mastoid process. On the right, incision was made anterior to the sternocleidomastoid muscle, there being a large solitary gland, soft to the point of fluctuation. On further exposure the glands posterior to the sternocleidomastoid were also found slightly enlarged. Every visible and palpable gland was removed. Two of these were about the size of almonds the remainder about that of peas. The sternocleidomastoid was closed by catgut, with drainage on the one side.

The operation gave considerable relief for the time being and it was several months before he experienced any new symptoms; these came in the form of a nasal stenosis. He noticed an encroachment on his breathing space, and consulted a nose and throat specialist who could see no visible signs other than general turgescence and increase in hypertrophy of the tissues and asked me what I had operated for. I told him and we concluded that this trouble was caused by the deeper glands enlarging and encroaching on his breathing space.

He has done fairly well, but recently has shown a recurrence in the glands which were not operated, not being palpable or visible at the time of the operation. He is now suffering from dyspnea, a part of which can be ascribed to his nasal condition, the rest, I believe, due to a mediastinal involvement. He seems to show no axillary or inguinal involvement at this time, but it would seem probable that he has some mediastinal glands, also some pressure signs. There is considerable swelling at the angle of the jaw where the more recent involvement took place.

The microscopical examination of the tissue showed the typical hyperplasia of the lymphatic cells and in the harder glands a network of fibrous proliferation, the changes being typical. In looking over the literature, it is very interesting to see the different views that men take of this. Some of them believe it is a disease absolutely by itself and characterized as an infection; others believe it is a malignancy. Both have seemingly very good arguments to support their views.

## DISCUSSION

DR. WILLIAM S. DEUTSCH: I want to report an interesting case that very likely was of this kind but at the time we did not recognize it as such. It was with the late Dr. Dixon that I went one day to operate on a case of glandular involvement in the groin. Dr. Dixon removed the glands, one from each groin, but I do not remember the particulars. The result of that operation was that at the end of three days the man had a thousand, I should say, palpable, enlarged glands all over the body. It seemed that the operation just brought the process into play. His body was studded with glands that you could see and feel, while at the time of operation there was only a mass in each groin. I think I have never seen a case like it.

DR. H. McC. YOUNG: May I ask if he had fever after?

DR. DEUTSCH: I do not recall.

DR. MCKITTRICK: What did the microscopic examination show the glands to be?

DR. DEUTSCH: That I do not remember. The thing that I recalled when I read this announcement was this: that the patient on the next day, though we did not see him for two days, showed a general enlargement of glands.

DR. SEELIG: I would like to ask Dr. Elbrecht what prompted him to do an enucleation of the glands en masse in preference to tracheotomy.

DR. ELBRECHT: There is not that much pressure now. The man is not suffering that much pressure. I simply removed the glands that were visible and palpable.

DR. SEELIG: Why did you not combine that with a tracheotomy?

DR. ELBRECHT: I did not think it was indicated. I advised him to follow this up with x-ray treatment, which he has done and claims to have got some relief out of it, just how much I do not know.

DR. WILLARD BARTLETT: There was one very interesting phase to this; that is, the absence, apparently, of any function in the left sternomastoid muscle. Dr. Elbrecht says he divided it above the point where the nerve supply usually comes off the spinal accessory nerve, and sewed it together. Now I have had a similar experience a number of times where I am sure that I divided above the entrance of the nerve and the nerve was not damaged. I never saw any return of function in a sternomastoid that had been divided. That patient is not using his sternomastoid. I never yet have had a patient complain of loss of function or notice it especially. I am surprised that while it makes to us such an apparent deformity the patient does not notice it.

Now as regards the intrinsic disease, in an instance of this kind I had the glands and all the findings sent up to Dr. Yates at Milwaukee, who replied at great length. His suggestions were, essentially, most complete dissections of all the affected regions, the use of his serum, sunlight and general hygienic treatment. I was a little surprised to learn that he had come to the point of absolutely the most complete and painstaking dissection; no matter how many regions were affected, dissect all of them. That does not seem very logical when we know that we cannot get at all the regions that probably are affected. The patient for whom he suggested this, after she had the dissection, refused all treatment. That was a year ago. She is in much better health than she was at that time, and I have wondered whether she really had Hodgkin's or not, in spite of Yates' report.

DR. W. C. G. KIRCHNER: But he found the organisms that he claims are specific?

DR. BARTLETT: No, in that instance I believe he did not; but his impression was that the case was one of Hodgkin's anyway. I believe that his organism has not been universally accepted, or, at least, others have not found it with the same degree of regularity that he has.

DR. SEELIG: He goes so far as to say that if you are not going to dissect it all out, do not even take out a piece for examination. He says, as Dr. Deutsch's case indicates, that an incomplete operation only makes it much worse.

DR. LISTER TUHOLSKE: I have here a photograph of an extreme case that might be of interest. Incidentally, since this is being mentioned, I think it would be rather hard to dissect out all those glands; many, of course, do not show. I first saw this patient four weeks before his death. He had noticed these glands about a year or so before. At the time we saw him he was running a temperature of 102 or 103. Nothing was done for him excepting Roentgen ray treatment, which did not seem to have any effect. He got steadily worse and had general anasarca. The most interesting part was that for the last two weeks he ran a daily temperature of between 105 and 106.

DR. FRANCIS REDER: May I ask Dr. Elbrecht if he is satisfied with the progress his patient has made since the operation?

DR. ELBRECHT: No.

DR. REDER: I am very sorry that I was too late to see the patient, because the patient came to me at

first and I refused to operate. He was very anxious to be operated. I had suggested removal of the glands at a time when they were about as large as a hen's egg on the left side and on the right about as large as a hazelnut. When I told him that I would not operate on him, the gland on the left was as large as a goose egg and on the right it was the size of a hen's egg. I had him on iodid of potassium for a while and the growth seemed to be stationary and he improved perceptibly, but later on the anemic condition manifested itself. There were no axillary or inguinal enlargements that I could make out, but I thought in the last six weeks that I could detect an enlargement of the spleen.

DR. ELBRECHT: I was unable to find that.

DR. REDER: I was a little doubtful as to the diagnosis. A few months ago I had an unfortunate case that proved to be sarcoma with recurrence within two months and death very promptly after that. He was treated with radium and was emaciated down to skin and bone at the time he died. The tumor disappeared. I regarded this as more or less of a malignant disease at the time, and the differentiation that I made of extreme malignancy from a mild process was that in the latter the tumor had a typical contour, was well rounded and not confluent into the surrounding tissues, there was still a line of demarcation present. But later on, on the left side, the tumor melted into the adjoining tissues.

DR. ELBRECHT: It was firmly adherent to the sternomastoid.

DR. REDER: Did you have him on any treatment?

DR. ELBRECHT: I had him on Fowler's solution for some time.

DR. KIRCHNER: I have seen three such cases and they do not always present the picture that was shown in the case Dr. Tuholske has reported and the one that was here this evening, in that they do not always have symmetrical or general glandular involvement. Sometimes it happens that a more or less localized condition is noticed, with a rather pronounced inflammatory reaction which makes the diagnosis extremely difficult. In one of the cases, on which I operated this made the diagnosis extremely difficult, the condition being more of an inflammatory character or such as we sometimes see in sarcoma with skin involvement. In such instances the entire tissue is densely infiltrated and the dissection is practically impossible. In the case that I operated, the specimen subjected to pathologic examination gave the picture of sarcoma; subsequently general glandular involvement took place and a careful dissection of the glands of the groin was made. The glands were sent to Dr. Ives, who made cultures which were sent to Chicago. One of the Chicago men saw the specimen and pronounced it the same as they have found in their cases. The patient then received the vaccine treatment without any especial benefit. He died, having all the general symptoms of Hodgkin's disease. About the same time there was a case at the City Hospital that had a local involvement, the glands of the neck being affected. The neck was extremely large, producing pressure symptoms, and a tracheotomy was performed. He would not permit operation to have these glands removed and subsequently, there being somewhat a difference of opinion as to the diagnosis, some believing even on section and examination of the glands that it was sarcoma and others disputing the diagnosis, the patient was given salvarsan. He had several injections and, much to the surprise of everyone, these glands reduced. Later on, they returned and the patient died of asphyxia. Just about the same time we saw a case that was more or less in extreme condition, with pronounced glandular involvement, even the mediastinal glands being affected and respiration changes noticed.



There is one point regarding the infection in these cases, namely, many of them have ulcerated teeth or some lesion in the mouth that is apparently an exciting factor or a means of entrance of the organisms. That is something that I believe we should look for in these cases.

**A NEW HEADLIGHT.—CATGUT ESPECIALLY DESIGNED FOR LIGATURES. — CATGUT ESPECIALLY ARMED AND HARDENED FOR THE SUTURE OF HOLLOW VISCERA.— A NEW STAY SUTURE.**—By DR. WILLARD BARTLETT.

I must apologize for bringing a lot of trifles here, but they have a certain bearing, I suppose, on the success of our operative work and since they have all been tried by at least a year of actual work and have facilitated things a little in my hands, perhaps they are worth looking at, if you have not all seen them.

A headlight may not be used enough by general surgeons to be of any interest to them. I must say I have not seen it used much by general surgeons, but at St. Anthony's Hospital there is no skylight and after working in the dark for some years I simply had to do something else, and in view of that fact I devised an operating room light. While that is satisfactory enough for the upper surface of anything it does not do you any good if you are working, for instance, with a goiter. For getting around and under a big goiter there is nothing that will light you at all satisfactorily except an individual light held just where you want it, but the average light is held not only in your way and gets in your eyes but the one who holds it gets in your way, so that it is a source of annoyance and sometimes of soiling. In cavity work I now work a great deal with a headlight, and the first thing I found was that the headlights were hot, so hot I could not use them. You will see that this produces practically no heat and it gives a bright light.

The reason that it is not hot is, of course, readily understood when I tell you that it is a 3-volt lamp on a 113-volt circuit and the other volts are taken up here on a rheostat which would burn if you touched it, but the cord is 12 or 14 feet long and that heat 12 or 14 feet away does not heat you.

There is an excellent one on the market but the mirrors for it are made abroad and you cannot buy them at all. The one man who made these lenses is in the French Army and the light is not being imported, not even being made over there. All the other lights employ a small-size 113-volt lamp and in the summer you will simply bake your head, you cannot stand them, and to one who is at all sensitive they are exceedingly annoying in the winter.

The next point is weight. Now that is about as light as any on the market. It is very much lighter than most of them. I have sometimes worked all morning with it and the weight is so little that you hardly notice it.

It is cheap. I gave it to Phillips who makes it with rheostat for \$10.

DR. F. J. TAUSSIG: Have you used it in vaginal work?

DR. BARTLETT: Very frequently. It is of the greatest help.

DR. MCKITTRICK: Have you used it in abdominal work?

DR. BARTLETT: Yes. For instance, take the common duct and when it lies very deep it is pretty hard to get it, but with this you are perfectly independent of any other source of light.

Now here are two or three things that I have been doing with suture materials. I have been playing with suture material all my life, and at odd moments I

have devised certain things that make the work simpler. They are none of them indispensable. The first is catgut prepared in such a way that they make certain maneuvers easier than they would otherwise be. In a goiter one ties so many ligatures that anything which facilitates the tying keeps the sutures clean and saves energy. Now here is an ordinary tube, of somewhat large size, containing a reel wound with 10 feet of fine catgut. Perhaps one in a large number might stick. I have not seen one stick but Dr. Blair told me he had one that did.

The way I use the material is by keeping the reel in one hand. I have long made a practice of tying with one hand, as I believe most other people do or can do. It is exceedingly convenient to have 10 feet hidden in one hand because it does not drag all over the field, and furthermore it stays moist enough to tie without any rigidity and does not get sloppy or wet or sticky from dragging around in the tissues because it never touches them, and it is exceedingly economical because 10 feet cost very little more than most makers charge for one tube of 5 feet.

DR. DEUTSCH: Would that hold good with the chromicized?

DR. BARTLETT: I have had only the plain put up, because I prefer plain ligatures.

DR. SEELIG: What does it sell for?

DR. BARTLETT: A tube is 35 cents, instead of the usual 25 cents for half the amount of catgut.

DR. SEELIG: Have you had any put out in the iodids?

DR. BARTLETT: No, but I do not see why it would not work.

DR. DEUTSCH: Can that be used as suture material just as well?

DR. BARTLETT: Yes.

Here is another catgut development, which I was prompted to scheme up when I saw that a silk or linen thread which penetrated the mucous membrane by accident and carried highly acid stomach contents along its track, resulted in infection and the formation of a new ulcer wherever the stitch went. Certainly there is nothing original in that. It has been published by many others but I noticed that in my own cases I operated four of my patients for jejunal ulcers and in every instance found a stitch in the new ulcer. That prompted me to use catgut also for the outer suture row.

It takes a pretty big needle to thread any strand of catgut; furthermore the needle tears a big hole no matter what catgut or what needle is used. So there was a reason for developing a needle and a gut which would not tear, so I had a needle made with a channel cut in the end and stamped onto the end of a catgut thread. It occurred to me that the ordinary catgut would not perhaps last long enough to be depended on, so I had gut exposed to a tanning solution which is after the well known method of Mikulicz, but exposed double the ordinary length of time in order to get an extra hard strand. I have now in a number of instances used it to the exclusion of all permanent materials with never an accident. The Mayos have used it in many cases and never had anything break down, so I presume it is safe to say that it will resist absorption long enough for all practical purposes.

A very nice way of making lateral anastomosis of two rows is to begin the inner row in the middle and go in opposite directions. With that in mind, I had two needles stamped on some of these threads, so that it is very easy to just tie that in the middle of the inner row behind, then proceed around one corner with one needle, the opposite corner still being open, then take the other needle and proceed in the other way.

DR. DEUTSCH: Have you been able to stamp on the curved needles?

DR. BARTLETT: No. I should think it would be possible, but not very feasible on account of the expense of the needles.

DR. PHL. HOFFMAN: Is this done by hand?

DR. BARTLETT: There is a little machine which has a groove in which the needle is placed. The needle has a groove in the end. The catgut is laid in, the stamp comes down on it and turns the edges of the needle in just enough to hold the thread.

Here is a piece of hard Chinese silk which I got onto at Downes Brothers in London. It will not fray nor unravel, nor do any of the stunts that silk is prone to do. It is just the opposite of the soft silk that Dr. Halstead uses at Baltimore. He uses that in order to have the leukocytes work their way into these tissues, and he is very well satisfied with it in his work. I use a moderately hard strand, No. 1. I think, Downes Brothers have greatly popularized it; they import it from China. I want to suggest it as a stay suture for abdominal operations. You have all used silkworm and I have too, until recently, but I never could tell, no matter what strength it seemed to have, when it was going to break and it does not always break when I tie it but breaks later. So in recent months I have been using this ordinary cambric needle with that piece of silk on it with an inch or so of rubber threaded on it as I first saw Moynihan use in Leeds, tying the thing over the rubber to prevent the silk getting into the skin and leaving ugly crossmarks.

DR. SEELIG: Do you have any trouble in picking the fascia up with your straight needle?

DR. BARTLETT: Of course it is not so easy as the curved needle and I first tried it with trepidation, but it works.

DR. SEELIG: How about the same thing with a curved needle?

DR. BARTLETT: I do not believe it would work.

DR. LEIGHTON: Do you use that just for the fascia?

DR. BARTLETT: I go down through everything except, perhaps, peritoneum. I do this after sewing the peritoneum.

DR. TAUSSIG: How about a colored skin?

DR. BARTLETT: I have not operated on a colored person since they got a colored hospital. There are some skins that it is hard to get this through because this is a round cambric needle. Dr. Halstead told me the other day at Baltimore that this was awfully nice but it was expensive. He said, "You know you can only penetrate the skin once with a cambric needle; after that, it is dull." The trick in putting a cambric needle through is this: Be very certain that the skin is on a little stretch and that you work absolutely at right angles to it; if you slant off a little bit, imagine what a deep surface you have to go through; get off the right angle and you get in trouble.

Here is the same thing but of an infinitesimally small size. It is a size which I had not thought I could use until I began to do blood vessel surgery with still smaller things. There is a No. 12 needle stamped on the same China silk of a size which is called 0000. It is exceedingly useful for sewing up the skin of the neck or the skin of the face. While I have not tried it, I think it might be used on a large blood vessel. I have used it on little tendons and have sutured a nerve sheath with it. I used it the other day on pyloric stenosis in a baby. Everything else was too big.

DR. ELBRECHT: Do you mean you would use it if you had to resect a gut on a very small baby? Is that the same silk the eye men use? I have been using the finest grade that they use.

DR. BARTLETT: I do not know. Before I put it out I asked Dr. Ewing what they liked to use on the eyeball and he told me this size.

DR. YOUNG: Have you ever tried braided silk?

DR. BARTLETT: I do not like it.

DR. REDER: Would you care to use it on a harelip?

DR. BARTLETT: I use it anywhere on the face. I do not believe I have tried with harelip, but I should think it would do well.

DR. LEIGHTON: Do you do gastroenterostomy with interrupted sutures now?

DR. BARTLETT: No, all continuous—that is, on ulcer cases.

DR. H. M. YOUNG: There was one technical point which interested me about the lamp, and that is the question of the heat. They make a cold lamp in cystoscopic lamps now. The old lamps were very hot. I suppose the heat depends on the glowing of the little, fine wire, not the amount of electricity actually passing through. The lamps used now have a double sheath with layer of air in between, and I wonder if that is not the reason this is cold.

DR. BARTLETT: I may be wrong in my idea that it is a matter of voltage. The rheostat gets exceedingly hot.

DR. SEELIG: I have a head lamp which gets exceedingly hot and the rheostat does also.

DR. LEIGHTON: Would it be possible to do blood vessel anastomosis with this silk?

DR. BARTLETT: Not on fine vessels, but I believe if you tore the axillary vein you could easily repair it with this.

DR. SEELIG: I have used that swedged-on needle in chronic gut and found it extremely useful. It had one advantage that I think Dr. Bartlett did not bring out, which is that it can be used without a thimble. Some of us used to work with thimbles. I think there was a time when Will Mayo used one, and you are very apt with the smaller needles to go through your glove. I have found there is just enough of an obtuse angle on this needle to give you purchase and something to push on and yet blunt enough not to go through your glove. I have used this and it worked beautifully.

DR. REDER: I am very much pleased that Dr. Bartlett has succeeded in getting us a needle with a thread attached. It has been many years since I approached an instrument maker whom I wanted to have attach a silver wire to a needle. At that time I sewed up the skin flaps in breast amputations with a button suture and I wanted a two-needle top to the silver wire in order not only to overcome the obstruction that you encounter in pushing a needle through the skin, but also the great tear that the heel of the needle makes in pulling the wire through. He told me at that time that it was impractical—too expensive. Now that we have a needle of that kind I believe that many surgeons who think much of the delicacy of their suture line will welcome it. This threading the catgut through the needle's eye and causing obstruction when you pull it through delicate structure like the peritoneum has deterred me from using it when I did wish to use catgut.

DR. SEELIG: I see an objection to the stay suture in its expense.

DR. REDER: You have to overlook that.

DR. BARTLETT: Any piece of silk on a straight needle is just as good as that.

DR. SEELIG: Can you get cambric needles sharp enough in stock with eyes sufficiently large?

DR. BARTLETT: Perhaps you could not. I have not had the same success with ordinary cambric needles bought in stores in putting them through the skin as I do with others.

DR. ELBRECHT: I like horsehair for the skin. It has more elasticity than any of them.



# AN EFFICIENT SUPRAPUBIC DRAINAGE TUBE.—By DR. FRANCIS REDER.

This suprapubic drainage tube has given me much satisfaction, and I beg to call your attention to it and at the same time ask your opinion on the matter.

Prostatectomies have swayed from the perineal section to the suprapubic operation. Owing to my own personal experiences, I do very few perineal sections now, and I am indebted to a colleague for saying to me, "Just try doing a suprapubic; it is just like enucleating a pus tube." He was about right. The comfort that the patient gets and the rapid convalescence, of course with a few exceptions, are far above the perineal.

The greatest difficulty we encounter is in the drainage of the bladder, to keep the patient dry from the extravasation of urine that is bound to take place and to keep blood clots out of the tube. I have had no difficulties whatever with this drainage tube.

This two-tampon arrangement I have attached because if there is considerable hemorrhage all that is necessary to do is to pack into the cavity one on each side of the catheter and then attach silk ligature. The dressings can be pulled out through this tube and the drainage tube allowed to remain in place for any length of time and the field is absolutely dry.

DR. YOUNG: Do you irrigate all your cases?

DR. REDER: For about forty-eight hours. It seems to be very soothing and to a certain degree diminishes the tenesmus that follows. It is agreeable to the patient; in fact, sometimes the patient asks when the irrigation has been discontinued that it again be started.

DR. YOUNG: I was interested to hear that Dr. Young of Baltimore has discontinued irrigation. He simply puts his tube in and does not irrigate. He thinks that the irrigations keep the hemorrhage going.

DR. REDER: We know that lukewarm water increases hyperemia.

## BENTON COUNTY MEDICAL SOCIETY

The Benton County Medical Society met in Lincoln in the Bank parlors, April 26, 1917, from 10 to 12 a. m., with the president, Dr. E. L. Rhodes, in the chair. After calling the meeting to order the minutes of the last meeting were read and approved, followed by the regular routine business. The following members were present: Drs. E. L. Rhodes, O. L. Cuddy, W. G. Jones, S. O. Stratton, of Lincoln; Dr. T. S. Reser, of Cole Camp; Drs. E. F. Haynes, H. G. Savage, J. A. Logan, R. L. Pomeroy, and J. R. Smith, of Warsaw.

The secretary, Dr. J. R. Smith, read a paper on "Obstetric Complications," after which a free discussion was entered into by all present.

The matter of the fee-bill was afterward discussed and a standard adopted.

The next regular meeting will be held in Cole Camp the latter part of June.

J. R. SMITH, M.D., Secretary.

## BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at their rooms at St. Joseph, Wednesday evening, April 2. There were seventeen members present, the president, Dr. F. Spencer, in the chair. The minutes of the previous meeting were read and approved.

A communication addressed to the president from Dr. J. A. Hansler, who is now located at San Antonio, Texas, informing the president that he is sick with tuberculosis and unable to keep up his society dues, was read and on motion of Dr. J. M. Bell, seconded by Dr. Kenney, the dues of Dr. Hansler were rebated

and his name placed in good standing on the roll of membership of the society.

The following applications for membership by transfer were read, duly acted on and elected: Dr. John Mark Allaman, transferred from the Smith County (Kan.) Medical Society; Dr. T. P. Scott, from the Shawnee County Medical Society.

The privilege of the floor was extended the members of the 1907 Ensworth Medical College Graduating Class, about fourteen being present, and the society present were invited to participate in a reunion lunch held at the St. Francis Hotel this same evening.

The president was instructed to appoint a committee of one in each section to make reports on the papers read at the State Meeting at Springfield.

A highly interesting paper was read by Dr. Herbert Lee on "Some Types of Mental Derangement." It was discussed by Dr. Scott.

There being no further business to come before the society the meeting adjourned.

## Meeting of April 18

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, April 18, thirty-one members being present. The president, Dr. Floyd Spencer, in the chair. The minutes of the last meeting held March 21 were read and approved.

Dr. C. H. Wallace addressed the society on the organization known as the Auxiliary Medical Defense Committee; explained the objects of the organization and the duties of the county branches to be organized under the supervision of the Auxiliary Medical Defense Committee.

On motion of Dr. Carle, seconded by Dr. Lau, a committee of three was ordered to be appointed by the chairman for the purpose of formulating some plan to help protect the doctor who is called into service. The following were named by the chairman to constitute this committee: Drs. H. S. Conrad, H. W. Carle, James F. Owens.

Dr. Woodson, representing the Auxiliary Medical Defense Committee of Buchanan County, requested that our society arrange its program to include at each meeting an address on medical preparedness.

Dr. T. P. Scott having located in this county, coming from the state of Ohio, was extended the privilege of the floor.

The paper of the evening was read by Dr. Caryl Potter on the subject "The Percy Cautery in Carcinoma of Cervix." It was discussed by the following members: Drs. L. J. Dandurant, R. Willman, James F. Owens, W. J. McGill, G. A. Lau, Daniel Morton. Discussion closed by Dr. Caryl Potter.

There being no further business before the society the meeting adjourned.

## Meeting of May 16

The regular meeting of the Buchanan County Medical Society was held in their rooms at St. Joseph, Wednesday evening, May 16, 1917, the president, Dr. Floyd Spencer, in the chair. Thirty-two members were present. This being a scientific session, no business was attended to. The minutes of the previous meeting were read and approved.

Dr. Jacob Geiger read a paper on "Diverticulitis." This was discussed by the following: Drs. H. S. Conard, M. S. Farber, and the discussion closed by Dr. Geiger.

This was followed by an address entitled "The Health Officer," by Dr. H. DeLameter. This was discussed by the following members: Drs. O. Schmid, T. J. Lynch, A. L. Gray, H. J. Farber, J. M. Bell. Discussion closed by Dr. H. DeLameter.

On motion, the society referred to new business and the following resolution, introduced by Dr. Otto Schmid, was adopted:

*Resolved*, That immediate steps should be taken to remedy intolerable conditions at the city dump, and in many other places in the city, before hot weather comes, and therefore we ask the city council to appoint a committee to secure information as to what is being done in other cities of the size of St. Joseph to dispose of the garbage, manure, etc., and then to prepare an ordinance providing how garbage, manure, night soil, ashes and household refuse shall be gathered and disposed of, and then advertise for bids to do this work under the terms and conditions of that ordinance, and let the contract to the best bidder.

There being no further business to come before the society, the meeting adjourned.

W. F. GOETZE, M.D., Secretary.

#### CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met at the Snapp Hotel, Excelsior Springs, Monday evening, March 26, with fourteen members present.

The board of censors were not ready to report on the roll, as the secretary announced.

Dr. W. E. Keith addressed the society on "The Tonsil as a Focus of Infection." Dr. Keith's talk was full of good points based, not on quotations from authorities, but on his experience. He believed the tonsil was the chief offender in cases of neuritis, appendicitis, bronchitis, nephritis, arthritis and many other diseases met in daily practice. Symptoms of tonsillitis were not a necessary element in reaching conclusions. In fact, an infected tonsil which is doing the mischief may be but little enlarged and not complained of by the patient. The degree of hypertrophy has nothing in common with the degree of virulence. Some serious cases of endocarditis were traceable to the tonsil as the cause. Dr. Keith promises some interesting data on this subject as soon as he gets it compiled from the patients themselves.

The paper was warmly applauded. It was freely discussed by Drs. Rice, Parker, Robichaux, Peterson, Lowrey and Craven.

Dr. E. H. Miller reported some rare and interesting cases from his field of work. Dr. Miller is referred to as "the Dean of Clay County Medicine," and we love to hear him. The cases presented by the doctor were of such nature as to require more space than we have here. He exhibited Roentgen-ray pictures and spoke feelingly of our heroic battle for our patients and of our deep regret when we must fail. I wish I could report these cases as Dr. Miller reproduced them. All members present joined in the discussion which followed.

Dr. L. B. Carson of Maquoketa, Iowa, was a pleasing visitor at this meeting. Interest was never better. Our members are men with distinctive ideas. Would that the absentees might appreciate what they are missing.

#### GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met in Meta, Mo., Wednesday, May 2, 1917. The following members were present at least part of the time: Drs. J. S. Enloe, C. T. Leach, J. W. Burgess, J. J. Ferrell, M. E. Spurgeon, S. E. Gaston, J. D. Seba, H. E. Kleinschmidt, J. A. Warner of St. Louis, and W. L. Sharp of Slater, Mo.

On motion of Dr. J. J. Ferrell, M. E. Spurgeon was elected chairman and he presided at the meeting. The minutes were read and on motion of Dr. J. J. Ferrell

the secretary was ordered to combine the two separate reports of the last meeting.

The committee appointed at the last meeting to investigate the applicant for membership, Dr. G. A. Nieweg, reported favorably and a ballot was prepared by which Dr. Nieweg was unanimously elected a member of the society.

Dr. J. J. Ferrell then made a motion to have the chair appoint a committee of three to write a new constitution and by-laws for this society, so that the by-laws and constitution will comply with the national and state associations. This motion was seconded and carried by a viva voce vote and thereon Chairman Spurgeon appointed Drs. C. A. Bunge, C. T. Leach and J. J. Ferrell as a committee on constitution and by-laws to report at the next meeting.

Dr. W. R. Ferrell of Vienna then extended an invitation to the meetings to meet in the Vienna Court House on Thursday, June 14, 1917, the same being the second Thursday in June. As an inducement to have the society meet in Vienna, Dr. Ferrell said that the people of Vienna would haul all the visiting doctors who would attend, from Freeburg to Vienna and back free of charge in automobiles. This offer was accepted and the next meeting will be held in Vienna, Maries County, June 14, 1917.

The business session being finished, the society proceeded to the consideration of the scientific program. The first paper was on the prevention of the two social diseases by Dr. H. E. Kleinschmidt of St. Louis. This paper was of much scientific value since it went deep into the study of the various agencies that are tributary to this social evil. His paper was discussed by Dr. W. L. Sharp who gave his experience as an army surgeon. Dr. Sharp favored the regulation rather than the suppression of the social evil.

Dr. J. A. Warner of St. Louis then gave an impromptu lecture on the various phases of immunization of vaccine and phylacogen therapy. At the conclusion of Dr. Warner's lecture the society went in a body to a hotel for a social supper. After supper they returned to the public hall where a large audience awaited them. The audience was entertained by instrumental and vocal music, which was very much appreciated by the society. Dr. Warner was the first to address the audience on immunization by vaccines. He was followed by Dr. Sharp who spoke on his experience while in the service of the United States on the southern border. This was followed by Dr. H. E. Kleinschmidt who spoke on preventive medicine from a sexual and hygienic standpoint. All these lectures were interspersed by instrumental and vocal music and the main sentiments expressed by each speaker were heartily applauded.

The audience was then dismissed and the society resumed the scientific program by the discussion of Dr. Warner's lecture.

JOHN D. SEBA, M.D., Secretary.

#### HOLT COUNTY MEDICAL SOCIETY

The Holt County Medical Society met in regular session in the Library Building, Mound City, April 12, with the president, Dr. John F. Chandler, presiding. There were eight members present as follows: J. M. Davis, Craig; J. F. Osborn, Corning; B. T. Quigley, J. M. Tracy, E. M. Miller and R. R. Miller, Mound City; J. F. Chandler and W. S. Wood, Oregon.

Dr. C. R. Woodson, St. Joseph, was present and delighted us with a very interesting discourse on "Mode of Onset of the Lesions of the Central Nervous System," together with its relation to aphasia. A vote of thanks was extended to Dr. Woodson.

The society instructed its delegate, Dr. R. R. Miller, to favor constitutional amendment regarding election of state president.



Our society is in a prosperous condition and harmony reigns in its membership.

Dr. C. L. Evans, who some time ago sustained an intracapsular fracture of the femur, is now able to get up to his office by the aid of a pair of crutches. He certainly has the sympathy of his fellow physicians in this county.

We are contemplating a summer outing which will probably be held sometime in August.

Our next meeting will be in Craig, July 12.

W. S. WOOD, M.D., Secretary.

#### HOWELL COUNTY MEDICAL SOCIETY

The Howell County Medical Society met in Dr. Elliott's office in West Plains, April 4, 1917, at 2:30 p. m. The following members were present: Dr. W. L. Culpepper, president; Dr. J. C. B. Davis, secretary; Drs. H. C. Shuttee, D. J. Nichols, J. H. Elliott and W. E. Bess.

A short time was given to clinics and discussion, after which Dr. Shuttee read a very exhaustive paper on "Acute Osteomyelitis," which was discussed by the members present. In this paper the doctor convinced the society that he had given this paper a great deal of time and study, and it was brought out in the discussion that every essayist should follow the pace set by Dr. Shuttee, of thoroughly familiarizing himself with the subject assigned him and in this way the society would never be without good papers at the monthly meetings.

The following essayists were appointed for the May meeting: Dr. W. L. Culpepper, "Indications and Contraindications for Prostatectomy"; Dr. J. C. B. Davis, "Tuberculosis of the Genito-Urinary Tract"; Dr. D. J. Nichols, "Infections of the Genito-Urinary Tract."

J. C. B. DAVIS, M.D., Secretary.

#### POLK COUNTY MEDICAL SOCIETY

The Polk County Medical Society met at Humansville, April 10, with the following doctors in attendance: R. Lee Russell, R. D. Dill and A. J. Stufflebam, Humansville; C. N. Hahn, Dunnegan; John W. Coy, Fairplay; J. F. Roberts, Bolivar; J. B. Wann, Humansville, and J. E. Dewey, Springfield, visitors.

The society was called to order by the president, Dr. Stufflebam. After reading and approval of the minutes of the last meeting the subject of medical examination for fraternal insurance was taken up. It was moved and carried that the society adopt a \$2 fee for such examinations.

The application for membership of Drs. H. W. Squibb of Halfway, and J. B. Wann, of Humansville, were reported favorably by the board of censors and were duly elected members of the Polk County Medical Society.

Dr. J. E. Dewey of Springfield read an interesting paper on "Some Surgical Conditions of the Prostate and Urinary Bladder."

Dr. A. J. Stufflebam reported a case of cancer of the breast with successful operation.

Dr. R. Lee Russell read a paper on "Tonsillitis" and reported a case.

Dr. C. N. Hahn reported a case of an infected arm with blood poisoning.

Dr. J. F. Roberts reported a case of acute retention of urine with prostatic hypertrophy and abscess in a man over 84 years old.

These cases were discussed by the members present.

The society adjourned to meet at Bolivar on the second Tuesday in June, 1917.

J. F. ROBERTS, M.D., Secretary.

#### RAY COUNTY MEDICAL SOCIETY

The Ray County Medical Society met in Richmond, April 25, in the assembly room of the Court House. The meeting was called to order at 2 p. m. by the president, Dr. T. B. Cook. The other members present were: Drs. Robert Sevier, William G. Estill, H. A. Elkins, J. W. Smith, C. B. Shotwell, L. D. Greene and J. E. Ball.

The minutes of the last meeting were read and approved.

Dr. J. W. Smith was elected vice president in the place of Dr. J. M. Buchanan who has moved out of the county.

Dr. Estill of Lawson was appointed delegate to Springfield in place of Dr. Buchanan.

Dr. H. A. Elkins was elected a member of this society, transferring his membership from the St. Louis Medical Society.

The program was as follows: Fibroid Induration of the Lung, by Dr. C. B. Shotwell. Fractures, by Dr. L. D. Greene.

Both papers were of much interest to all present and were freely discussed.

Dr. T. B. Cook of Rayville reported a clinical case of intraperitoneal abscess.

Dr. Spence Redman of Platte City, Councilor of the Twelfth District, addressed the society on matters of interest in the way of creating more interest and better attendance in the society.

There being no further business the society adjourned to meet again June 20, 1917.

J. E. BALL, M.D., Secretary.

#### SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society met in Oran, Tuesday, May 8, 1917, with the following members present: Drs. P. S. Tate, E. J. Nienstedt, G. S. Cannon, William S. Hutton, William H. Wescoat, J. A. Miley, G. T. Dorris, William O. Finney, and J. A. Cline. Dr. Malcolm of Sikeston, formerly a member of the society, was present also.

The object of the meeting was the adoption of a fee-bill, same to become effective July 1, 1917.

It was moved and carried that the following resolution be adopted:

*Resolved*, That whenever the physicians of a community that are members of the Scott County Medical Society agree on a schedule of fees that is not in conflict with the fee-bill of said society, it shall be considered unethical for any member of said society from a different community to vary from this schedule, and he shall be subject to dismissal for so doing. It was further moved and carried that a copy of the above resolution be printed on the fee-bill, with resolution, be displayed in the office of each of the members of the society.

There being no further business, it was moved and carried to adjourn to meet again in Oran, the second Tuesday in July.

J. A. CLINE, M.D., Secretary.

#### WEBSTER COUNTY MEDICAL SOCIETY

The quarterly meeting of the Webster County Medical Society was held at Seymour, March 21, 1917. The meeting was called to order at 11 a. m. by the president, Dr. T. S. Bruton. The following doctors were present: T. S. Bruton, Eli Trimble, J. W. Good, W. J. Rabenau, J. S. Sayers, W. A. Atkins, M. Highfill, E. H. Roberts, M. G. Roberts, W. H. Bollinger and J. R. Bruce.

The minutes of the last meeting were read and approved, and the report of the treasurer was also approved and bills allowed as read.

Reports of cases were then taken up and discussions followed until it was time to adjourn to dinner. We then went to the Stone Hotel, where we were served an excellent dinner. At 1 p. m. the meeting was resumed and the paper of Dr. Bruce on "Better Babies and Better Obstetrics" and Dr. Bruton on "Eclampsia" were read. These papers were discussed freely by all present.

Motion was made and seconded to hold our annual picnic at Belle Springs on the third Wednesday in June, weather permitting.

Motion was made and seconded that Dr. J. R. Bruce prepare a paper to be read at the meeting of the State Association to be held in Springfield in May, 1917. This motion carried.

J. R. BRUCE, M.D., Secretary.

#### WRIGHT COUNTY MEDICAL SOCIETY

The Wright County Medical Society held its regular quarterly meeting May 3, 1917, at Hartville in the office of Dr. A. J. Farmer. The meeting was called to order by Dr. R. A. Ryan, president, with the following members present: Drs. R. A. Ryan, Norwood; A. C. Ames, Mountain Grove; R. M. Rogers and J. A. Fuson, Mansfield; B. E. Latimer and A. J. Farmer, Hartville. Dr. J. R. Mott of Grovespring, visitor.

Dr. Latimer presented a very interesting case of pleuritic effusion. After the patient had been examined by the doctors Dr. Latimer proceeded to aspirate and three pints of a straw-colored fluid were drawn off.

The scientific program consisted of the following papers: Smallpox, by Dr. Latimer. Preventive Typhoid, by Dr. Ames. Softening of the Brain, by Dr. Rogers.

The doctors presenting these papers showed that they had put much study on their subjects and they had good papers. A lively discussion was had on each of the papers by all present and each one felt that he had learned something new on the subject.

Dr. J. R. Mott of Grovespring presented his application for membership in our society and the same being in due form and signed by the censors the secretary was instructed to cast the vote of the entire society for his election.

No further business appearing the society adjourned to meet at Norwood the first Thursday in August.

J. A. FUSON, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**FERRIC CACODYLATE; IRON CACODYLATE.**—A ferric salt of cacodylic acid containing from 39.7 to 44.9 per cent. arsenic (As). A grayish-brown powder, soluble in water. The use of ferric cacodylate has been proposed in cases where the effects of iron salts and the mild arsenic effect of cacodylates is desired. Dosage: From 0.015 to 0.1 Gm.

**AMPULES IRON CACODYLATE-MULFORD, 0.03 Gm.**—Each ampule contains ferric cacodylate 0.03 Gm. in 1 Cc. solution. The H. K. Mulford Co., Philadelphia.

**AMPULES IRON CACODYLATE-SQUIBB, 0.03 Gm.**—Each ampule contains ferric cacodylate 0.03 Gm. in 1 Cc. solution. E. R. Squibb and Sons, New York City (*Jour. A. M. A.*, April 7, 1917, p. 1043).

**ACETYSALICYLIC ACID-SQUIBB.**—A non-proprietary brand of acetylsalicylic acid complying with the standards of New and Nonofficial Remedies. E. R. Squibb and Sons, New York City.

**ASPIRIN, L. & F.**—A non-proprietary brand of acetylsalicylic acid complying with the standards of New and Nonofficial Remedies. Lehn & Fink, New York City (*Jour. A. M. A.*, April 28, 1917, p. 1261).

### PROPAGANDA FOR REFORM

**PIPERAZIN AND OTHER ORGANIC URATE SOLVENTS.**—From a review of the literature P. J. Hanzlik concludes: There is no reliable evidence to show that piperazin, in small or therapeutic doses, imparts to urine urate solvent qualities, either by direct addition or after excretion; excessive doses produce a slight but negligible increase in uric acid excretion, the same being effectively produced by sodium bicarbonate or sodium citrate; there is no reliable evidence to indicate that piperazin can remove or prevent urate deposits; diuresis is uninfluenced by even large doses of piperazin and its administration does not materially reduce the acidity of the urine; scientific evidence, though limited, and clinical opinion indicates that piperazin is valueless in gout. Hanzlik also reports that there is sufficient evidence to indicate the worthlessness of the following as urate solvents: quinic acid, quinoline, colchicum, piperidin, Urosin, Lycetol, Sidonal, Lysidin and U:ol (*Jour. Lab. and Clin. Med.*, February, 1917, p. 308).

**CYANOCUPROL.**—Studies of the effects of "cyanocuprol" on tuberculous processes, carried out by Japanese investigators, have been published. "Cyanocuprol" is stated to be a copper cyanid preparation, the exact composition of which is being kept secret. Even if its identity should become known, the use of "cyanocuprol" is decidedly in the experimental stage (*Jour. A. M. A.*, April 7, 1917, p. 1057).

**AMBRINE.**—Ambrine is a French secret preparation that has been on the market for many years. It has recently come into prominence through sensational articles in the lay press. For all practical purposes it is solid paraffin to which some material has been added to make it adhesive and more plastic. For use it is heated until liquid and then applied to open wounds and burns, forming a relatively impervious dressing (*Jour. A. M. A.*, April 7, 1917, p. 1057).

**PARAFFIN FILMS.**—The popular propaganda for "Ambrine" having brought the paraffin film treatment of burns into prominence, Torald Sollmann has instituted experiments to devise a suitable, open formula preparation which is simple and yet meets all requirements. He suggests that surgeons who desire to experiment with the paraffin treatment of burns use simple preparations of known composition. Ordinary paraffin melting at about 50 C. (122 F.) appears to possess practically the mechanical properties of "Ambrine." A mixture containing some asphaltum (asphalt varnish, Trinidad or Bermudez, "asphalt cement" and Texas asphalt were tried) gives a preparation of superior pliability. Other formulas are given and their trial suggested (*Jour. A. M. A.*, April 7, 1917, p. 1037).

**CORPORA LUTEA (SOLUBLE EXTRACT).**—The Council on Pharmacy and Chemistry reports that "Corpora Lutea (Soluble Extract)" marketed by Parke, Davis and Co. in the form of ampules for hypodermic administration is ineligible for admission to New and Nonofficial Remedies, because it is a secret preparation advertised under extravagant claims. No state-



ment of composition is made beyond the indefinite claim that it is an aqueous solution of "soluble Corpora Lutea Extract," each ampule corresponding to 0.2 Gm. desiccated gland. How these soluble products are obtained, whether they represent all the water-soluble principles, or whether some have been eliminated is not stated. The claims made for the action and uses of the preparation do not make clear the essentially experimental status of the article and are therefore misleading. Further, the use of this extract is advised not only in functional amenorrhea and the ordinary reflex consequences of physiologic or artificial menopause, but also in conditions where the expectation of benefit cannot possibly be fulfilled (*Jour. A. M. A.*, April 7, 1917, p. 1056).

**STERLING VIOLET RAY GENERATOR.**—This is a small frequency apparatus with some vacuum and possibly other electrodes. The apparatus is not one for producing violet or ultra-violet rays in the scientific meaning of those words. The apparatus will not do the things claimed for it in the advertising booklet which includes the treatment of practically every ailment known to mankind (*Jour. A. M. A.*, April 14, 1917, p. 1141).

**PHARMACOLOGY OF STOVAINE.**—M. I. Smith and R. A. Hatcher find that in toxic doses stovaine produces death in animals by inducing immediate and simultaneous paralysis of the heart and the respiration, the action on each being independent of the other. They find that stovaine disappears rapidly from the blood stream after its intravenous injection. Stovaine is slightly more toxic than novocaine by similar modes of administration and complete recovery does not follow the administration of toxic doses of stovaine so promptly as it does with corresponding doses of novocaine (*Jour. Pharm. and Exp. Ther.*, January, 1917, p. 231).

**HEXAMETHYLENAMIN IN PYELITIS.**—I. A. Abt advises caution in the administration of hexamethylenamin in the pyelitis of infants. It should be under continuous observation and its use should be continued for an extended period. The urine should be frequently examined for blood. Abt has more than once seen cases of fatal nephritis which he believes due to the overuse of hexamethylenamin. He advises that, if given to infants under 1 year of age, it should be given in one grain doses followed by water. This dose may be repeated four or five times daily (*Jour. A. M. A.*, April 14, 1917, p. 1100).

**THE LUTIN TEST.**—Confirmatory of previous investigations, H. N. Cole and H. V. Parysek find that some non-syphilitics respond positively to the luetin test and that in those non-syphilitics who do not respond spontaneously the reaction can generally be provoked by iodids. They also demonstrated that the reaction may be provoked by potassium nitrate and potassium bromide. Proving that the potassium ion in the potassium iodide and bromide was not concerned in the reaction, they found that the luetin test may be provoked by sodium bromide, sodium iodide and calcium bromide (*Jour. A. M. A.*, April 14, 1917, p. 1089).

**ABOLITION OF THE SALVARSAN PATENT.**—The Chicago Medical Society and the St. Louis Medical Society urge the abolition of the salvarsan patent. The patent should be abrogated, not only because the patentees have not supplied the demand, not alone because they have dictated to the medical profession who should have the drug and how much a physician might have, not alone because of the war with Germany, not alone because of the special needs of the government at this time for the control of venereal diseases, not alone because, as some claim, the patent at Washington does not correctly describe

the product, but also because the people who are supplying this product are charging prices that are exorbitant. In order that a sufficient supply, to control the ravages of one of the most serious diseases that afflict humanity, may be assured, it is the duty of Congress to abrogate the salvarsan patent (*Jour. A. M. A.*, April 21, 1917, pp. 1187 and 1203).

**CITRIC ACID AND CITRATES.**—Citric acid and the alkali citrates, potassium citrate and sodium citrate, are oxidized in the body with formation of carbonates and hence tend to increase the alkalinity of the blood. Citric acid and the alkali citrates tend to render the urine less acid and, in large doses, render it alkaline (*Jour. A. M. A.*, April 21, 1917, p. 1206).

**PEPSODENT.**—Wm. J. Gies writes that Pepsodent is a dentrifice widely advertised as a mucin digestant. In a research conducted for the First District Dental Society of the State of New York, Professor Gies and Miss Franke found that the digestive claims were not warranted in any degree. Gies holds that there is about as much common sense in the proposed use of Pepsodent for this purpose as there is in the oral administration of a few grains of Lactopeptine to improve impaired tryptic digestion in the intestines (*Jour. A. M. A.*, April 28, 1917, p. 1278).

## BOOK REVIEWS

**CANCER, ITS CAUSE AND TREATMENT.** By L. Duncan Bulkley, A.M., M.D., Senior Physician to the New York Skin and Cancer Hospital, etc. Volume II. New York: Paul B. Hoeber, 1917. Price, \$1.50.

The book contains some very interesting theories as to the cause of cancer, based on the wide experience and studious observation of the author. It is written in attractive style and would give pause to the general use of the knife in treating cancer if all could share the author's enthusiasm. W. C. G.

**NEW AND NONOFFICIAL REMEDIES, 1917,** containing description of the articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association prior to Jan. 1, 1917. Cloth. Price, postpaid, \$1. Pp. 412 + xxiv. Chicago: American Medical Association, 1917.

This book lists and describes the nonsecret proprietary remedies that have been accepted by the Council on Pharmacy and Chemistry of the A. M. A. It also describes the newer nonproprietary remedies which give promise of some real value that have been accepted by the Council. Each description includes the chief facts physicians desire to know concerning composition, dosage, indications, cautions to be observed, etc. The book also contains general articles which compare the value of the proprietary remedies with the established drugs they are intended to supplant. Every physician who wants to keep abreast of the times should have a copy of this annual.

**ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1916.** Cloth. Price, postpaid, 50 cents. Pp. 87. Chicago: American Medical Association, 1917.

This volume contains the reports of the Council which were adopted and authorized for publication during 1916. It includes reports of the Council previously published in *The Journal of the American Medical Association* and also reports which, because of their highly technical character or of their lesser importance, were not published in *The Journal*.

In this volume the Council sets forth the reasons for the rejection of the articles which were examined

and found ineligible for New and Nonofficial Remedies. It also explains why certain preparations included in previous volumes are not contained in the latest (1917) edition of New and Nonofficial Remedies. Physicians who wish to be informed in regard to the status of proprietary and unofficial remedies should have the volumes of the Council Reports, in addition to New and Nonofficial Remedies.

**THE BIOLOGY OF TWINS (MAMMALS).** By Horatio Hackett Newman. Cloth. Price, \$1.25 net. Pp. 186, with 55 illustrations. Chicago: University of Chicago Press, 1917.

- This is a most valuable contribution to a subject which is always of deep interest both to the scientist in the field of biology and to those in whose families twins have appeared.

The popular vein of treating facts that might otherwise be found extremely dull, aids in extending the knowledge of the biological development of twins and appeals to the general reader interested in heredity; at the same time the work touches on the embryology in such degree as not to lose sight of the dependence of the material under discussion to basic principles of the science.

The homosexual and heterosexual results of twin embryonic development is briefly discussed; also the curious mammalian twins, the armadillo and the freemartin among cattle where female twin is always sterile, are explained.

The monozygotic offspring or the dizygotic individuals, twins, triplets, conjoined twins, and similar monstrosities, are considered.

The problems of twin development, sex and heredity, always closely interwoven, add to the wealth of information so compactly presented. G. C. M.

**THE GROWTH OF MEDICINE FROM THE EARLIEST TIMES TO ABOUT 1880.** By Albert H. Buck, M.D. Yale University Press, New Haven, Conn. Price, \$5.00.

It is the first work published by the Williams Memorial Publication Fund, founded in 1916 by Dr. George C. F. Williams of Hartford, Conn.

In the preface the author modestly apologizes "for attempting to prepare an account of the history of medicine which shall present the essential facts truthfully and with a sufficient degree of attractiveness to win the continuing interest of the reader, which shall place before him, and especially before those who are just at the threshold of their professional career, word pictures of those physicians of past ages whose lives may safely be taken as models worthy to be copies." There is no doubt that he has succeeded in bringing before the English-speaking medical profession a work that will do much toward stimulating interest in medical history. His literary style makes it far more interesting than any of the previous efforts in our language, or even in any other tongue. Probably for lack of space some of the fairly important figures, such as Johannes de Kettham, Athanasius Kircher and a few others, are omitted. Coupling the name of Lebert with those of Morgagni, Rokitsky and Virchow reminds us that until now the work of Herman Lebert (1813-1878) as a pathological microscopist has not received deserved recognition. Let it be hoped that he will be better known to the medical men of succeeding generations. We are also pleased to note that Paracelsus is given more space than has been customary among English authors.

On page 89 we find Fredrick instead of Francis Adams and on page 104 Albrecht von Haller is called Albert von Haller. These errors may be due to oversight by the proof reader.

The whole work is a splendid effort. It is easy to read and to understand. It will surely encourage many medical men to further study in the domain of medical history. R. E. S.

**TEXTBOOK OF SURGICAL OPERATIONS,** Illustrated by clinical observations, for physicians and students. By Prof. Fedor Krause, Privy Medical Councilor, Directing Physician Augusta Hospital, Berlin, in association with Emil Heymann, M.D., Chief Physician, Augusta Hospital. Translated into English and edited for American readers by Albert Ehrenfried, A.B., M.D., F.A.C.S., Assistant Visiting Surgeon, Boston City Hospital. In six volumes. Volume I. With 55 plates having 233 illustrations in two or more colors and 61 figures in the text. New York. Rebman Company, Herald Square Bldg., 141-145 West Thirty-Sixth Street. Price, \$7.00.

The preparation for operation discussed in Chapter 1 is a concise essay on this subject and describes the routine practice of the operators at the Augusta Hospital. In the discussion of the preoperative administration of narcotics the hypodermic injection of morphin and atropin customary in this country is not even mentioned but such synthetic chemicals as veronal, sulphonal, trional and adalin are referred to, a use of these drugs that is not common in this country.

In Chapter 2, devoted to anesthesia, we find a brief reference to degeneration of liver parenchyma by chloroform, but the reader is not informed of the great frequency of such a sequel in cases of septic infection, as proved by Opie.

Chapter 3 treats for the most part of Krause's technic to attain asepsis, which is markedly different from the custom in this country. Krause depends on scrubbing and oxycyanid of mercury solution for disinfecting the hands, discarding alcohol altogether.

Chapter 4 discusses "After-Treatment." It is worthy of special mention to note that Krause does not pass a catheter on his patients until twenty-four hours have elapsed. Many surgeons with a tendency toward meddlesome catheterization could read this chapter with profit.

Under "Treatment of Wounds in the Head" we find the following on page 79: "First the surroundings of the wound over a considerable area are shaved and painted with benzine followed by tincture of iodine or with iodine alone." This statement is inconsistent with the declaration found on page 54, that "all previous cleansings of the skin with ether or benzine should be omitted, as well as washing with soap and water, or performed at a considerable interval before the iodine is applied, because all fluids make their way into the glandular openings and intercellular spaces and prevent the tincture from working."

The recommendation that all compound fractures of the skull should be treated by radical operation are words of sound wisdom from Krause, who is a master in cranial surgery. The author's remarkable genius is again demonstrated in the description of plastic operations on the face and spinal plastic procedures (Chapters 7 and 8) where many original and practical ideas are advanced.

Operations on special organs which belong to the sphere of the general surgeon are considered in Chapters 9, 10 and 11, but minor operations and procedures within the domain of the specialist are given perfunctory consideration. Operations on both maxillary sinuses after the method of Partsch, Killian's operation on the frontal sinus, and Schloffer's exposure of the sphenoidal cells and the nasal approach to the hypophysis are extensively discussed and liberally illustrated.

Chapter 12 is the longest as well as the best chapter in the book. Trifacial neuralgia receives most systematic and explicit attention and the various operations on the branches of the fifth nerve are beautifully described. Surgery of the Gasserian ganglion closes the volume. Several well chosen illustrations from Toldt's Anatomical Atlas are utilized to bring out the anatomy of the trifacial nerve more clearly. All other illustrations are original and well adapted to their purpose. R. E. S.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee  
ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

JULY, 1917

Number 7

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION { W. H. BREUER, M.D., Chairman  
COMMITTEE { S. P. CHILD, M.D.  
                  { M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### THE TRUE PHYSICIAN A MORAL FORCE\*

PRESIDENT'S ADDRESS

J. FRANKLIN WELCH, M.D.  
SALISBURY, MO.

As your retiring president I wish to acknowledge the high honor you have conferred on me in calling me to preside over the deliberations of this association during the past year. I would be recreant to a high sense of moral obligation did I not feel an honest pride and satisfaction in this evidence of your esteem and confess my grateful thanks for the confidence of your favor and support.

I am conscious that it is because of no special merit of my own that this coveted honor has fallen to my lot. That I have succeeded in bringing to this occasion a deeper interest, a richer pabulum than my worthy predecessor to their respective term of office, I cannot and do not claim. But I have labored to the best of my ability to keep in close touch with every interest of the association and to make this meeting successful and profitable. I have tried to stimulate and enthuse the older members to a greater effort, to foster and encourage the younger members, to bring to our association new and earnest life and increase of membership. And now in the brief time allotted to me, I want to lay special stress and emphasis on the importance of these meetings; the fruits of their reward are manifold.

The social relation is helpful and strengthening; we become better acquainted with ourselves and with one another; here is fostered and nurtured the spirit of unity and peace in the bonds of a common brotherhood. This amity of social concord teaches and adorns the higher concepts of an ethical morality that gives character and integrity to our noble profession.

A profession so intimate and close in its sovereign ministry to the public confidence demands that we declare a beautiful expression of principles and live them in our lives. Again, I would not have you unmindful of the educational consideration that attaches to these meetings; we come together with our common experiences and in the interchange of thought and theory there is keen stimulus for study and research. We are deeper, fuller men after such occasions. We relate our success and (not always) our defeat; yet it were not well to boast of the one without confessing the other.

Let us not be afraid to acknowledge our failures; it is a miserable, mean spirit of moral cowardice. Indeed, defeat and success are sometimes closely blended; they are both our schoolmasters and one not more unkind than the other. Besides, our first lessons are in the school of defeat, and they are oftentimes our most valuable lessons. There is no great end in life but has its beginning in this primary school. So let us not be ashamed of them when we are doing our best, but make them stepping stones to larger, fuller victory.

There is, moreover, in our mingling together a sense of recreative pleasure which we are better for enjoying. It is a brief respite from the harness of professional service. We feel a tonic potency steal into our flesh and blood, awakening the sleeping sentinels at the door of latent capability. We go back to our labors with stronger resolve, with new light and interest in our profession.

Every doctor in Missouri should become a member of this association; he that does not do so neglects his opportunity. He owes it to himself and to his constituents; no man is indispensable to this association; but the association is indispensable to every physician within its bounds.

Excuses are too often the subterfuge of a man careless alike to his own success and to the success of his profession. Rarely is there ever

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

a case that a man can honestly plead "too busy," but if such be true, the reason is more urgent that he take a "fatigue furlough" and enjoy a season of recreation and profit with his society; or if some one excuses himself as being too poor, his redress might be relieved by putting himself in touch with a live medical society. It would beget the confidence of his neighbors and enable him to forget the ceaseless watching and waiting for patients that never come.

To you who have read the *Bonnie Brier Bush*, there is no more composite picture of true professional service and the true professional gentleman than is illustrated in the life and ministry of Dr. William McClure, a physician of the "Old School." So beautifully is the author's rendition of this heroic character that his unselfish labors, his deep personal sacrifices, challenge our admiration and appeal to our latent virtues to arouse the good in us and give us the spirit of his zeal. In the characterization of this strong personality we have a conception of the brotherhood of man too little taught by the church of today, yet beautifully expressed in the life and ministry of the Man of Galilee. Every profession has its heroic characters—men of vision, men of heart, and to such the world is indebted in measure far beyond its appreciation and requitement. Indeed it would sometimes seem that these noble and illumined lives who do most and give most, do not live in the sunshine of the world's favor.

They do not receive the applause of men, nor yet do they seek to wrest by their earnest labors and high attainments the perishable wreath of the world's green bays; they covet not stations of brief authority and power to strut with fuss and feathers; neither do they seek to amass wealth that pampers the pride of life yet does not enrich; but fed by the diviner virtues, they are content in the moral consciousness of duty done, and having as their reward the inspiration of doing good and seeing others happy and blest through their earnest, self-sacrificing labors.

I would not be understood in this connection as saying that the physician should disregard his material interest to the extent of foregoing a provident livelihood, for I believe the representative of any honorable profession or vocation has a right, and a just right, to look to his profession or vocation for a generous support; but he must not prostitute the one or the other to the end of seeking merely selfish emoluments. But the truth I would emphasize is that there is always a larger increment even in the opportunity of secular pursuits than the dollars and cents we can wrest from them, and especially is this true of the profession of medicine. Let the purpose and end of true service be always impressed with a considerate regard for the

interest of others, and mindful that the greatest reward of best service is not met and requited by the payment of a monetary consideration, however generous its token, but rather in the truer coin grateful hearts lay on the altar of a life whose ministry is consecrated to the deep, appealing needs of humanity.

It is true we live in a gilded age where the greater multitude of mankind are laboring and struggling for that which is not bread, and growing lean and famished on the husks and stones the sordid spirits of the age would educate them to accept in remuneration for any and all service. Confreres, brothers, I appeal to you in the name of our high profession not to let the greed of a gross materialism stop your ears to the voice of wisdom, and persuade you into an apostasy of faith that would capitalize professional interest in our fellow-man's afflictions into a financial transaction, while our heart-strings, no longer touched by the angel of our better nature, grow too cold and callous for any expression of human sympathy. No! Let us not barter the skill and attainments of our high ministry on the same basis that the farmer barter his hogs, corn and hay, or the artisan the articles of his handicraft; these all have a merchantable value; but not so with benefits conferred by the grace of our profession—these are too closely blended with the diviner part of man to commercialize their beneficence.

But you say we have to live, provide for our families, and educate and fit ourselves in preparation to render the highest skilled service to our brother's need. And I say so too. No man has a better right to live by his labor than the one who is helping somebody else to live and bringing the sunshine of peace and joy into the afflictions and sorrows of his toilworn and burden-oppressed brothers struggle for earthly existence.

The physician is worthy of his hire, but when his brother's need is greater than his own exigency it were better to abate the doctor's claim; the obligation he has surrendered will not be lost, but bread cast on the waters which shall return to enrich him in after years. And, moreover, let us remember that no ripper fruits feed and nourish the fullness of one's life than grow and may be gathered from the tree of earnest, disinterested service, spending and being spent, for others. This food like the manna of old whitens the pathway of every man who gives in the name of his Lord and Master such labor of love to his fellow-man's need.

Or, yet again, some may say, the world is money mad, and fashion and show, pomp and equipage, are the magnets that best draw the



world's heart to one's personality, emphasize his professional capability; and would you have us obsolete from a lack of material assets to advertise our merit in the garish light of appearances, however deceitful the appearances may be? Well, as regards the publicity, and even the attraction of business, I must admit some grounds of serious import, and I would not too lightly disregard a condition which nevertheless too obviously exists and more or less colors and determines even our higher human responsibility.

But if all the world is a stage and all men and women are actors thereon in a hurly-burly drama of mixed comedy and tragedy, let us be governed by some moral standard, and not default too much in our better nature in order to keep our place on the mimic stage. If we have to change life into a cold, calculating machine of self-computing interest and let our vices whip our virtues into a servile bondage, then we have cheated ourselves and robbed the world of something better that we might have been.

Oh, the buzz and bustle, the tumult and the strife in the cosmos of our man-built civilization; its center of moral gravity is seriously displaced and its foundations rest not on the adamant of best human virtues—may we not say it is like an inverted pyramid perilously set on its apex and rocking to and fro to a fateful fall; yet, herein we build ourselves gilded tombs of carnal corruption unto the fires of the eternal judgment.

It would seem to me that no professional ministry incites or makes stronger demands for higher type of service, not only the skill and aptitude, the knowledge and wisdom taught by the schools, but the moral excellence and spiritual graces that enter into and make up manly Christian character.

From that charming novel, "Pendennis" by Thackeray, I quote the following beautiful tribute of the Doctor: "It is not only for the sick man, it is for the sick man's friends that the doctor comes. His presence is often as good for them as for the patient, and they long for him yet more eagerly. How we have all watched after him! What an emotion the thrill of his carriage wheels in the street, and at length at the door, has made us feel! How we hang upon his words, and what comfort we get from a smile or two, if he can vouchsafe that sunshine to lighten our darkness. Who hasn't seen the mother prying into his face to know if there is hope for the sick infant that cannot speak, and that lies yonder in its little frame battling with fever? Ah! how she looks into his eyes! What thanks, if there is light there; what grief and pain if he casts them down, and

dare not say 'hope'! Or, is it the house father who is stricken—the terrified wife looks on, while the physician feels his patient's wrist, smothering her agonies, as the children have been called on to stay their plays and their talk. Over the patient in the fever, the wife expectant, the children unconscious, the doctor stands as he were fate, the dispenser of life and death; he must let the patient off this time, the woman prays so for his respite!

"One can fancy how awful the responsibility must be to a conscientious physician; how cruel the feeling that he may have given the wrong remedy, or that it might have been possible to do better; how harassing the sympathy with survivors, if the case is unfortunate. How immense the delight of victory."

I love the profession of medicine; I love the traditions that come down to us through long years of its honorable past; I revere the great and noble men who have left the impress of glorious personality and example on its history, and may not we, mindful of their heroic struggle and self-sacrificing labors, catch the spirit of their inspiration and rededicate ourselves to the great ministry of healing from the humanitarian standpoint rather than from methods too strongly suggestive, in many instances, of commercial motives.

The physician should be a representative man in his community—a man so careful of his honor that he will maintain that strict probity of character that not only invites and receives, but retains under all circumstances, the highest respect, the fullest confidence of all with whom he comes in contact.

Gentlemen, I may hold rather a too exalted standard for members of the medical profession in an age so deeply tinctured with materialism and when selfish interest is so strongly accentuated, but I cherish the hope that a profession that comes so close in its ministry to the afflictions and sorrows of the human family will beget in us as its representatives a deeper, truer consecration in our sacrament of service to our fellow-man.

I thank Thee that the sight of sunlit lands  
And dipping hills, the breath of evening grass—  
That wet, dark rocks and flowers in my hands,  
Can give me daily gladness as I pass.

I thank Thee that I love the things of earth:  
Ripe fruits and laughter, lying down to sleep;  
The shine of lighted towns, the graver worth  
Of beating human hearts that laugh and weep.

I thank Thee that as yet I need not know,  
Yet need not fear the mystery of the end;  
But more than all, and though all these should go—  
Dear Lord, this on my knees: I thank Thee for my friends."

# INTRA-OCULAR TUBERCULOSIS AND ASSOCIATED INFLAMMATORY LESIONS OF THE UPPER RESPIRATORY TRACT\*

F. O. SCHWARTZ, M.D.

AND

M. M. MEYERS, M.D.

ST. LOUIS

Before 1850, tuberculosis of the nasal mucous membrane was almost unknown to medical science.

B. Fraenkel and Sir Morell Mackenzie confessed that they had never seen a case.

Fraenkel thought tuberculous ulceration very rare, and Mackenzie admitted the fact that he had overlooked cases of nasal tuberculosis.

The German surgeon, Richard von Volkmann, stated that he believed a number of tuberculous affections of the nose were overlooked or incorrectly diagnosed. He demonstrated that certain types of ozena supposed to have been due to congenital lues were of a tuberculous nature.

Hajek first succeeded in proving Volkmann's assertion.

He found tubercle bacilli in the granular masses removed in nasal affections believed to be ozena.

Shurley reported a case of nasal tuberculosis in a monkey.

The nose possesses a certain degree of immunity against tuberculosis, and complete immunity to gonorrhea, as proved by Ricord and Diday.

Hildebrand proved that micro-organisms in the air we breathe do not normally reach the deeper portions of the respiratory tract, but are lodged in the nose and nasopharynx.

Robert Koch stated that if the tubercle bacillus enters the respiratory tract it is removed by the ciliated epithelium.

In addition, Cornet points out that also the mucous forms a potent physiological safeguard against the inroad of bacilli.

The upper parts of the respiratory tract are endowed with either ciliated epithelium or pavement epithelium in a thick layer.

There are a few areas in relation with the upper air passages devoid of epithelium which is replaced by a strong constant double current of leukocytes, one flowing toward the interior and the other toward the exterior. The leukocytes are phagocytic.

The first to mention nasal tuberculosis centuries ago, was Morgagni, who presented the post-mortem findings in a case showing tuberculous ulcerations of the upper pharynx, extending to the velum palati and thence to the nasal mucous membrane.

Later, in 1850-1852, Willigk reported 1,600 autopsies made at the Prague Pathological Institute. There were 476 cases of tuberculosis of which one had tuberculosis of the septum narium.

For the next twenty-five years, the literature is devoid of any recorded cases. In 1875, on November 16, W. Fairlie Clarke presented before the Pathological Society of London a specimen of what he called tuberculous lupus of the tongue, palate and gums, from a male patient, 18 years of age, who died at West London Hospital of inanition, the tuberculous affection finally preventing him from taking food. The mucosa of the nose was thickened and ulcerated. Diagnosis, *intra vitam*, as one of tuberculosis, by Sir James Paget. The lungs were entirely free from any pathological changes.

In 1877, two years later, Laveran reported cases in the *Union-Medicale*.

Twelve years later, in 1889, Mertens reported thirty-one cases, which he had observed under the direction of Dr. Otto Seifert, chief of the University Polyclinic for Diseases of the Nose, Buccal Cavity and Throat, at Wuersburg.

Cases were reported right along of material significance and relevance, and we especially wish to call attention to the ten cases reported by Herzog, in 1893, in *The American Journal of the Medical Sciences*, particularly his table of statistics, believing he is one of the first to point out the association of ocular tuberculosis and nasal tuberculosis.

Permit us to quote some of Herzog's remarks which have a bearing on our paper.

Among complications he mentions those familiar to all, and states the following: "A very important complication to which I want to refer, with some details, upon which no writer on the subject of tuberculosis of the nasal mucous membrane has as yet laid stress is, that with obstinate cases of dacryocystoblenorrhoea, with tuberculosis and lupus of the excretory duct of the lacrymal apparatus and the conjunctiva in a combination of nasal with conjunctival tuberculosis, the former may be the primary or the secondary factor."

Another interesting case is that reported by Knapp, with a conjunctival tuberculosis occurring in the left eye in a male, 19 years old. The microscope and animal experimentation proved its tuberculous nature.

Knapp found cicatrices of former ulcers in his patient's nose, and says: "In our case it is possible that the infectious material was transmitted from the meatus of the nose through the lacrymal canal into the conjunctival sac. This way of propagation is probable by the development of tuberculous ulcers around both puncta-lachrymalia."

Fick reported a case of tuberculosis of the nasal duct of the left eye, and on examination,

\* Read before the St. Louis Medical Society, Feb. 3, 1917.



it was found that the nasal septum on its left side presented tuberculous ulcerations.

Haab stated to the Zurich Medical Society that he had presented to it two years previously a case of tuberculosis of the conjunctiva, complicated with nasal tuberculosis.

We see in these cases the nose was considered the primary seat of trouble.

In one of Herzog's cases the dacryocystoblennorrhea of the left eye preceded the nasal tuberculosis of the same side for eight years.

In his second case there was a lupus of both naso-lachrymal ducts and tuberculous lesions in both nasal cavities; in another tuberculosis of both naso-lachrymal ducts and nasal tuberculosis, and a dacryocystoblennorrhea in still another.

The foregoing establishes the undoubted transmission of a tuberculous process from the nose to the external portions of the eye or its appendages by way of the tear duct, but makes no mention of the intimate connection between the globe itself and the nose through a system of lymphatics.

Ordinarily, ocular tuberculosis is easily overlooked, as the clinical picture is readily confused with that of syphilis. It seems that the frequency of systemic tuberculosis would put one on the alert, but as a rule, tuberculosis of the eye is passed over and treated with indifference or with the iodids and mercury.

There has been no real stress laid on the correlation between intra-ocular structures and the upper respiratory tract, except perhaps when pressure symptoms necessitated the prompt evacuation of some one of the sinuses, or when there was obstruction of the lower part of the tear duct due to a hypertrophied turbinate, or other causative factors.

But the frequency with which colds in the head are attended by ocular manifestations and the frequency with which such colds start trouble in the general economy leads up to the observation that ocular tuberculosis and inflammations, either acute or chronic, of the nasal interior go hand in hand.

Lesions may be present as a result of the toxins of a tuberculous infection, as some men, Fuchs, Leber and DeWecker, contend that a primary tuberculous focus must be assumed to exist somewhere in the body, as in the lung or kidney.

We know that the absorption of toxins as well as local infections can cause structural changes in the eye.

DeSchweinitz cites a case of homonymous crescentic scotomata in association with ethmoiditis and tooth root abscess, where proper treatment of these conditions was followed by complete recovery. He thought that the bacterial elements of the toxins which caused the lesions interpreted by the scotomata, originated in the

ethmoid sinusitis and oral sepsis. The close relation of frontal, post-ethmoid and sphenoidal sinuses or the maxillary antrum with important structures of the eye, especially so in their over-development, is an anatomical fact.

Acute or chronic bacterial inflammations of the spheno-ethmoidal space could readily infect the optic nerve. Clinical and anatomical research has demonstrated the intimate relation existing between the lymphatic spaces of the orbital contents and the submucosa of the nasal sinuses. Why then can we not have direct communication and absorption of toxins and bacteria by way of these channels from one structure into another?

For instance, one author states: "We know that tubercle bacilli have been and can be demonstrated in adenoid tissue, but to this is usually added a septic infection. During the past 12 years, I have carefully examined the post-nasal space of cases of phlyctenulosis and have always found infected adenoids present. The treatment of all these cases, no matter how intense the local eye symptoms may be, is prompt removal of the adenoids, and if necessary, the tonsils too."

It was my good fortune to observe a series of cases from the diagnosis through the various steps of treatment of ocular tuberculosis, over a period of four years, while with my preceptor, Dr. W. H. Luedde, who has previously reported them. The work of Drs. W. H. Luedde and Greenfield Sluder on the association of intra-ocular tuberculosis and nasal conditions and the comparative frequency of these lesions has led us to offer our modest array of clinical material. In presenting our cases, the plan followed was to make a routine ocular examination first, then a nasal examination, with two exceptions, where the nasal examinations were made first. When a suspicious lesion was noted, either in the eye or nose, a von Pirquet test was made, frequently a Wassermann, and then close observation for a short time, followed by injections of tuberculin for diagnosis.

Tuberculin for diagnosis or treatment, in unskilled hands is dangerous. We know of one case, outside our series, where temporary absence of function in the eye resulted from a primary overdose of tuberculin which was used for diagnostic purposes. The minute graduated dose with a due regard for temperature variation in the patient is the proper method of administration. Our diagnoses are not based on positive von Pirquet tests, but on the positive systemic or local reaction following a subdermal injection of tuberculin. We obtained local reactions in all cases, a reaction being either severe or mildly increased inflammatory phenomena at the site of the lesion. The following cases are not presented in their entirety, as some portions not bearing on the particular sub-

ject of the association between intra-ocular and nasal conditions, but necessary in any purely ophthalmological case record, had to be omitted.

CASE 1.—L. L. Young unmarried, white female, 25 years old, press feeder, was treated off and on by several local oculists for a luetic inflammation of the right eye. She was seen first on June 6, 1915. Vision in the right eye was 20/48, or less than half of normal, and in the left eye was 20/12, or above normal. Wassermann was negative. Von Pirquet +. The ophthalmoscope showed the fundus invisible in the right eye except for the reflex, and floating opacities in the vitreous. There was some iris pigment on the anterior lens capsule. In the left eye the fundus was normal, media clear.

On June 12 she was given 0.001 mg. of tuberculin subcutaneously. On the next day there was a clearer view of the fundus and vessel markings in the retina were clearly visible. She had pain at the site of injection.

On June 19 she was given a similar dose of tuberculin and reported that during the past week she had a "cold" in her head. Her vision on this day in the right eye was 20/38. Following this last injection her vision dropped to 20/75 and the vitreous was very cloudy. Her temperature at this time was 100.6 and she had a violent reaction at the point of injection. Her nose up to this time was practically free from any trouble and on June 26 her vision again rose to 20/38 and the nasal findings were a chronic suppuration on the right side of the nose, with some discharge on the left. Her vision rose under treatment to 20/24 on July 31. However, five days later it dropped to 8/150 and the vitreous was much cloudier than usual. She says that she again had a cold in her head. It seems that after each injection of tuberculin there was produced a lowering of her vision in the right eye and an accompanying reaction in the nose. You will also note that whenever she had a cold in her head there was a corresponding drop in the vision of the right eye. The vision of the left eye remained the same throughout the entire treatment.

On September 25 her vision was 20/24 and the fundus was clearly visible with the ophthalmoscope. Several days later following a severe cold in her head her vision dropped to 20/30 and the last time she came for observation the vision in the right eye had attained the normal. It was then 20/19.

CASE 2.—A. S. White female child, 8 years old. Has been sick off and on for the past several months with "jaundice" and "fever." She has received anti-luetic treatment during the past three months for a supposed syphilitic interstitial keratitis in the left eye.

The diagnosis in this case was a tuberculous interstitial keratitis. She had a ++ von Pirquet some time before I saw her and also a +++ Wassermann. Her temperature was 99.2.

Nov. 11, 1915, she was given 0.0005 mg. tuberculin. Four days later her vision rose to 20/42 and the infiltration seemed thinner above. She was again given the same amount of tuberculin and four days after this injection the lesion showed such an amount of thickening that her vision dropped from 20/42 to 20/84 and later to 10/168. Her mother remarked that she had considerable fever. Her vision gradually came up to 20/24 and on June 15, 1916, she was again given 0.0005 mg. of tuberculin. Her vision on the next day dropped to 20/60 and she had no apparent visible reaction in the eye, but a positive reaction in the nose. However, as you will note, her vision dropped, and her temperature rose to 99.8. The test was made after several days of observation of the nasal condition and after the preceding infections,

as per our chart, had been cleared up. Two days following the injection her vision rose to 20/19 and the temperature became normal. At the last observation her vision in this eye was 20/19+.

CASE 3.—C. H. White, married female, aged 32, who complained of headaches on reading, and said also that sometimes she arose with a headache. Her husband is now ill with tuberculosis. The vision in either eye was 20/12, quite above normal. The ophthalmoscope showed in the right eye a little yellowish area of exudate, probably in the choroid, with some pigmentation surrounding it. There was also a black pigment spot in the superior portion of the fundus. The left eye was negative.

On July 8, 1916, she was given 0.0005 mg. of tuberculin subcutaneously and two days later, there was quite a reaction in the right eye. There were two more new yellow exudative spots in the region of the original site as described above, while her vision had fallen one letter. There was no nasal reaction and she was given another 0.0005 mg. tuberculin.

July 11, the area of infiltration at the site of the exudate was quite enlarged and more discernible, and the spots themselves were more prominent. She had a nasal reaction also on this day. Vision in the right eye is the same. Four days later, July 15, she saw 20/19+ while there is a report that the reaction is still present in the nose.

CASE 4.—A. G. Is a white female, unmarried, aged 27, who worked as a stenographer and desired relief from headaches. Vision in either eye was 20/15.

On ophthalmoscopic examination the right eye revealed one spot in the choroid, which had a circumscribed pinkish area surrounding it, in the inferior segment of the fundus. There were also two yellowish points out in the nasal periphery. The left eye was negative.

She states that there is evidence of a spot in her visual field, right eye, which she perceives above, and also that she has a slight rise of temperature in the afternoon.

Her fields were plotted and the "spots" (which corresponded to the ophthalmoscope picture above) localized.

July 15, 1916, after observation, she was given 0.0005 mg. of tuberculin, and on the 16th there was a reaction in the nose, in the right anterior series of ethmoid cells; no reaction on the left side. There was also a reaction in the region of the choroidal spot, the patient stating that she saw the spot in her field more distinctly since yesterday.

CASE 5.—K. H. White, widowed female, aged 40, who was referred for a complete ophthalmological examination. She has headaches and pain in her eyes off and on. She gives a history of having an afternoon rise in temperature for some time and also states that her husband died three years ago of tuberculosis. Vision, right eye was 20/24 and in the left eye 20/19. The ophthalmoscope showed a black pigment spot in the approximate center of the nasal segment of the fundus on a level with the disk. Left eye showed a yellow spot surrounded by an area of pigmentation in the temporal portion of the fundus.

A von Pirquet was made and was found to be faintly positive. She was given 0.0005 mg. of tuberculin and on the following day her vision in the right eye dropped to 20/60 and in the left eye to 20/24. There was no clear view of the fundus oculi obtainable, the retina in either eye appearing slightly puffed. There was also a slight exacerbation of the nasal symptoms with the finding of a positive nasal reaction. One day later, her vision rose to the same as before the drop, and a clear view was again obtainable of the interiors of the eyes.

CASE 6.—E. J. Well nourished, white, married male, 30 years old. He came first in 1912 for a



Case	Age	Sex	Diagnosis		Findings		Examination of Nasal Secretion or Pus		Other Examinations	Tuberculin Reaction		Final Comment
			Eye	Nose	Eye	Nose	Right	Left		Eye	Nose	
1 (L. L.)	25	F	Iridocyclitis, choroiditis, R. E.	Chronic ethmoiditis, dexter; secondary obstruction, R. middle meatus from operation	Iritis, epyclitis, chorioiditis, float- ing opacities in vitreous, R. E.	Chronic ethmoiditis, dexter	Nares or acc. sin. pus cells	Nares or access. sinuses neg.	Wassermann neg von Pirquet +	++	+	Quite improved
2 (A. S.)	8	F	L. eye, interst. kerat.	Chronic rhinitis; acute adenoiditis	Circumscribed dense central corneal infiltration	Bilateral ethmoiditis; small adenoids, adenoiditis	Pneumococci, M. catarrh., Bac. dipth., diphtheroid bac., pus cells, Hoffmann's bac.	Same as right, except no diphtheria bacilli	Wassermann+++ physical exam. negative von Pirquet ++	++	+++	Vision L. eye improved from 20/60 to 20/19+, lesion quite thinner
3 (C. H.)	32	F	Exudative areas in choroid	R. posterior ethmoiditis	Small amounts of exudate in retina; pigmentation surrounding exudate R. eye	Deflected septum left; hyper. post. end of left inf. turbinate	None	None	Von Pirquet +	+	+	Not followed up; husband has tuberculosis
4 (A. G.)	27	F	Pigmented choroidal exud. areas	Anterior ethmoiditis, bilateral	Spot in choroid and two yellow points of exudate in same	Sept. deviat. R.; turbs. swollen; arynoiditis; chr. aut. bilat. ethmoiditis	Pus cells, colonies of staphylococci	Same as right	Von Pirquet +	+	+	Sees less of spot in field than before; good
5 (K. H.)	40	F	Choroidal exudative areas	Chronic posterior ethmoiditis, bilateral	R. black pigment area, central median line, level with disk, nasal side retina; L. yellow spot in retina central med. line	Deflected septum to the left	Epithelial cells, lymphocytes, cocc. in pairs	Same as for right	Von Pirquet +	+	+	Final condition good (husband died of tuberculosis)
6 (E. J.)	35	M	R. eye, tuberculous scleritis	Deflected septum nasi sinister	Inj. of areas of sclera; very mild iritis	Deflected septum nasi sinister	None	None	Von Pirquet +, physical exam. negative	+++	+	Complete recovery over a short period (brother of No. 7)
7 (J. J.)	40	M	Double iritis with doubtful fundus lesions	Deviated septum	Severe iritis R. and L.; irides adher.; R. disk pale; later L. fundus showed gray area 1/2 disk area in inf. nasal part of disk	None except as under diagnosis	None	None	Wassermann neg., von Pirquet +, physical exam. negative	++	+	(Brother has ocular tuberculosis) Nose observed by Dr. S. S. Burns*

\* Condition improved after removal of left middle turbinate, opening of sphenoid sinus and evacuation of same; much creamy pus was removed.

reddening of the scleral portion of the right eye. At that time there was a low grade iritis present with some pain. He had succeeding attacks of this nature during the year, before we saw him, at intervals of three months each and had received treatment for syphilis from several men. His vision in that eye was 20/24. A von Pirquet was made and this was found to be ++. He did well on injections of tuberculin and had only one attack after being treated with tuberculin, in two years.

On Dec. 29, 1916, he came again with his right eye slightly reddened and painful. There was no evidence of an iritis. Two days later he was given 0.001 mg. of tuberculin and a nasal observation was made. The next day his eye was quite free from pain and any inflammatory suggestion. His temperature, however, was up one degree and he stated that he felt feverish and peculiar. A nasal reaction in the form of an acute coryzal attack was present. Several days later, after the symptoms had subsided, another injection of 0.001 mg. of tuberculin caused a severe reaction in the eye.

CASE 7.—J. J. White married male, aged 40, a farmer, was seen in consultation with Dr. X, who was treating him for double iritis, with iodids and mercury.

I found both irides completely adherent around the pupillary margin but was able to dilate them with mydriatics and found on ophthalmoscopic examination that both optic disks were quite pale, the left especially so, vision being, right 20/75, left 20/150.

His fields were taken and found to be contracted. Physical examination was negative as were also the Wassermann test and nasal examination. He had a slightly plus von Pirquet.

On Aug. 22, 1915, he received 0.001 mg. of tuberculin and the following day his vision was 20/38 and 20/75, right and left respectively. The same dose of tuberculin was given again on August 24th and 27th and on August 30th with vision 20/24+ and 20/60. Dr. S. S. Burns reported the presence of pus in the ethmoidal region, only on the left side of the nose. There were no ophthalmoscopic changes until the following day, when a grayish area was discernible at the inferior nasal margin of the disk of the left eye. This corresponded with a dent observed in the outline of his field originally. His vision and fields improved to practically normal under tuberculin.

Four months after his first appearance he suffered a relapse and was immediately sent to Dr. Burns for observation. His report was negative but two days later he again observed secretion from the sphenoidal or ethmoidal sinuses.

On Dec. 6, 1915, this patient had his middle turbinate removed on the left side and his sphenoidal sinus gone into with the evacuation of a creamy secretion. Improvement immediately followed, and the following year, when asked to have these cells again opened, we lost track of him.

In the foregoing cases we believe the nasal findings manifesting a latent nasal condition were either provoked or augmented by the administration of tuberculin, and in Case 7 especially, the symptoms of nasal involvement became so severe as to jeopardize the welfare of the eye, making a radical operation for the immediate evacuation of the sinuses necessary.

In Cases 3, 4 and 5 the patients were not treated for tuberculosis of the eye or nose because such treatment was not indicated, the tuberculin having been given diagnostically.

#### SUMMARY AND CONCLUSIONS

Ocular tuberculosis may or may not be associated with nasal tuberculosis or tuberculosis of the accessory sinuses.

Ocular tuberculosis may be associated with staphylococcic, streptococcic, diplococcic, pneumococcic, bacillus fetidus, bacillus perez syphilitic and other infections of the nose or accessory sinuses.

There may be present both a nasal tuberculosis and one of the other infections simultaneously.

There may be an ocular tuberculosis with a diphtheritic rhinitis in one naris and staphylococcic and pneumococcic rhinitis in the other, with a positive Wassermann; in fact, all combinations are possible, as illustrated in Case 2.

The nasal symptoms resemble a slight coryza in some cases, and in others are at times wanting.

The nasal reaction is usually present on the side corresponding with the ocular lesion or is most marked on the same side where the lesion is most severe, when both eyes are involved.

The use of tuberculin seems to produce a reaction in the regions of the nose and sinuses in individuals with ocular tuberculosis; but in patients whose nasal and sinus mucous membranes swell and produce a thin mucous or purulent discharge when injected with tuberculin, are we to regard this reaction as one indicating that the nose and sinuses are tuberculous, particularly if the secretions fail to reveal tubercle bacilli?

Would not the injection of any vaccine or bacteria produce the same reaction in mucous membrane surfaces, on the theory that a foreign substance is introduced into the body and gains access into the circulatory system, producing a vascular change, perhaps vaso-dilatation through a vaso-motor effect?

This is a phase of the work that is of relative diagnostic import, but it has its limitations.

We believe that nasal tuberculosis and sinus tuberculosis may infrequently be primary and have in mind the theoretical assumption of Adami, namely, the existence of a condition or stage of subinfection or preinfection of cells in certain diseases.

This fact, coupled with the gratifying results obtained in treating the nose, nasopharynx and sinuses in properly selected cases, brings us to the conclusion that in not only tuberculous disease of the eye, but in all others, the thought of free drainage in the nose and the exhibition of local antiseptics and nasal douches will do much toward assisting an earlier and more satisfactory result. With the isolation of the type of micro-organism at fault in the nose and sinuses, the proper bacterial autogenous vaccine must be used.



These measures, with tuberculin and the other standard methods of treating the individual from the internist's and ophthalmologist's points of view will lend an inestimable amount of good in helping the patient.

In closing, we wish to acknowledge the work of Drs. Stanley S. Burns and Geo. Ives of St. Louis, and thank them for their hearty cooperation.

Wall Building—Marina Building.

#### BIBLIOGRAPHY AND CASE REPORTS

Complete Examination of Literature from 1884 to 1917.

1. 1884-86: Literature is devoid of any mention of nasal or sinus tuberculosis.
2. 1887-88, Potter: Tuberculosis of nose, mouth and pharynx, Buffalo M. & S. J., xxvii, 295-302.
3. 1887, A. Cartaz: De la tuberculose nasale par, 1997 a Dehazere Lecrosnier, 28 P. 8 etc.
4. 1888, Breszen, Max: Tuberculose oder lupus der Nasenschleimhaut, eine Entgegnung auf Max Schaffer's Entgegnung in No. 32 des Deutschen Med. Wehnschr., Deutsche Med. Wehnschr., Leipzig, 1887, xiii.
5. 1889, Hajek, (M) Luc and others: Die Tuberculose der Nasenschleimhaut, Internat. Klin., Rundschau, Wien, 1889, 111, 13, 118-174-214.
6. 1890, Hahn Beerman, J.: Ueber primäre Tuberculose der Nasenschleimhaut, Wurzt, 1890, Becker 28 P. 8.
7. 1891, Olympitis, Plicque (A. F.): La Tuberculose des Fosses Nasale Am. d'Mal. de l'oreille du larynx, etc., Paris, 1890, xvi, 798-811.
8. 1891, Fitzpatrick, T. V.: Tuberculosis of Nose, Cincinnati Lancet-Clinic, 1891, 468-470.
9. 1892, Shurley, E. L.: A Case of Supposed Nasal Tuberculosis in a Monkey, Tr. Am. Laryngol. Assn., 1891, N. Y., 1892, xiii, 55-57.
10. 1892, Herzog, T.: Reported a Case.
11. 1892, Hajek, M.: Tuberculose der Nasenschleimhaut, Internat. Klin. Rundschau, Wien, 1892, vi, 1617-1620.
12. 1892, Ignazio, D.: Contributo-Allo Studio della Tuberculosis Nasale, Boll. d'Mal. d. Orecchio d. Gola e d. Naso-Firenze, 1892, x, 270.
13. 1895-96, Baurowicz, A.: Primary Tuberculosis Nasal Septum; Koschier and Orlando reported one case each.
14. 1897-98, Schimmer: Tuberculosis cutis nasi Budapest Primary Tuberculosis of Nasal Cavities, Brit. M. J., London, 1897, 11, 1263. Theisen, C. F.: Report of a Case of Primary Tuberculosis of Nose, Laryngoscope, St. Louis, 1898, iv, 79-85.
15. 1898-99, Walfsham, W. J.: Primary Tuberculosis of the Nasal Cavities, St. Barth Hosp., J. London, 1898-99, vi, 34-36; Magro (of Madrid, Spain): Reported a case 1898; Goerke, M.: Zur Pathologie und Diagnostik der Nasen Tuberculome, Arch. t. Laryngol. u. Rhinol., Berlin, 1899, ix, 50-631.
16. 1903, Ricord-Coenen: Primary Tuberculosis of Nose, Arch. f. klin. Chir., Berlin, 1903, lxx, 840-844.
17. 1905, Barwell, H.: Case Nasal Tuberculosis, J. Laryngol., London, 1905, xx, 381.
18. 1906, Caboche, H.: Tuberculose Nasale et meat inferieur deux cas. de tuberculose naso lachrymal, Ann. d. Mal. de l'Oreille, du larynx Par., xxxii, Pt. 2, 244-251; Chierici, L.: Contributo allo casuistica della tuberculosi nasale Rev. veneta de sc. Med. Venezia, 1906, xlv, 313-321; Delsaux, C. E.: Tuberculose de la Cloison Lupus du nez Couples Microscopiques Pratique Med.-Par. 1906, xx, 107; Dobson, L.: Case of Obstinate Recurrent Lupus of Nose, Treated by Kataphoresis, West London Med. J., 1906, xi, 115.
19. 1908, Caboche, H.: Contribution a l'Etude de la Tuberculose de la Pituitaire, l'Etude Etiologique et Clinique Ann. de Mal. de l'Oreille de Larynx, Par., 1907, xxxiii, Pt. 2, 321-428. Annals Otolaryngology and Laryngology, St. Louis, 1908, xvii, 180-242. Comas, D. C.: Case Tuberculosis of Nose Cured with Roentgen Ray; Lindt: Case Tuberculosis of Nose in Arch. Internat. de Laryngologie, Paris, 1908.
20. 1909, Beese in Ztuch: F. Ohren., Wiess., 1909; Grant, D.: Case Lupus of Nose, Polyclinic, London, 1909, xxiii, 51; Huey, A. J.: Case of Nasal Tuberculosis Terminating in Meningitis, N. Y. M. J., 1909, xc, 265; Lindt: Ibid., 199, 202.
21. 1909, Merkel, H.: München. med. Wehnschr., 1909, lvi, 1165; Tratman, F.: Case of Lupus of Nose Successfully Treated by Injection of Tubercle Bacillus Emulsion, Australian M. Gaz., Sydney, 909, xxviii, 70. Onodi, A.: The Oculo-Orbital Intra-Cranial and Cerebral Complications of Diseases of the Nasal Accessory Sinuses, Laryngoscope, St. Louis, 1909, xxix, 801, 822. Oppenheimer, S.: A Case of Primary Tuberculosis of the Nose, N. York M. J., xci, 1218; Renner, W. S.: Nasal Tuberculosis, Annals Otolaryngology and Laryngology, St. Louis, 1909, xviii, 571-577.

22. 1910, Freer, O. T.: Nasal Tuberculosis, Two Cases, Tr. Am. Laryngological Assn., N. Y., 1909, 103-119; Ann. Otol., Rhinol., Laryngol., St. Louis, 1910, xix, 1-14.

23. 1911, Chamberlain, W.: Tuberculosis on Nose with Report of Two Cases, Ohio M. J., Columbus, 1911, vii, 396-399; also Laryngoscope, St. Louis, 1911, xxi, 873. Hill, W.: Tuberculosis of Cheek and Nose, Prog. Roy. Soc. Med., London, 1910-11, Laryngol. Sect., 85. Parmentier: Tuberculose Nasale, Progrès. Med. Belge, Brux., 1911, xxxii, 17-21.

24. 1913, Abannus: Ueber Behandlung der Nasen, Rachen und Kehlkopftuberculose mit Hochfrequenz Strömen, Berliner klin. Wehnschr., 1913, 1804, 1806.

25. 1914, Cohn: Auftreibung des Knochener Nasengerüsts, bei einem Fall von Schleimhauttuberculose, Monatsch. f. Ohrenh., etc., Berlin u. Wien, 1914, xlviii, 1169-1171; Coleman, J.: Nasal Tuberculosis, Med. Rec., N. Y., 1915, lxxxvii, 147. Graham, C.: Tuberculosis of Nasal Fossae, Proc. Roy. Soc. Med., London, 1914-15, viii, Laryngology, Sect. 77; Hope, C. W. M.: An Unusual Case of Enlarged Tonsils.

26. 1915, Cadeo, F.: Contributo allo Studio della Casidetta Pseudotici dei minatori Tuberculosi, Milano, 1914-15, vii, 107-125.

27. 1916, Sweek: Tuberculous and other Chronic Infected Sinuses, Treatment of, Interstate M. J., 23, 225, March 16; Mundt, Infection (Focal) of Accessory Nasal Sinuses, Illinois M. J., 29-38, Jan. 16. Crane, Infections, Secondary Infections of Ear, Nose and Throat as Primary Foci for, Laryngoscope, 26, 1099, Aug. 16.

#### REFERENCES

1. Gamble, W. E.: Ill. Med. Jour., Chicago, 1916, xxix, pp. 307-9.
2. Griscom, J. M.: Ill. Med. Jour., Chicago, 1916, xxix, pp. 307-9.
3. deSchweinitz, G. E.: Tr. Coll. Phys., Phila., 1915, xxxvii, 385.
4. Stark, H. H.: Bull. El Paso Med. Soc., El Paso, Tex., 1916, viii.
5. Tunis, J. P.: Am. J. Ophthal., 1916, xxxiii.
6. Luedde, W. H.: Am. Jour. Ophthal., 1916, xxv, 69-83.
7. Weidler: Ophthalmology, Seattle, 1915-16, xii, 331-347.
8. Jackson: Annals Ophthal., St. Louis, 1916, xxv, 84-93.
9. McCool: Ophthal. Record, Chicago, 1916, xxv, 8-25.
10. Posey, W. C.: Ophthal. Record, xxv, 25-36.
11. Crampton, G. S.: Tr. Coll. Phys., Philadelphia, 1914, xxxvi, 319-322.
12. Shoemaker, W. T.: Tr. Coll. Phys., Philadelphia, 1914, xxxvi, 304.
13. Cobbledick: Brit. Med. Jour., London, 1913, ii, 1379.
14. Curtin, Man. Eye, Ear and Throat (Hosp. Ppt.), N. Y., 1914, xv, 147-156.
15. Davis: Am. Oph. St. Louis, 1914, xxiii, 1-32.
16. Knorr: Maryland, M. S. Bull., 1914, liii, 253-56.
17. Alt: T. B. Oph., 1911, xxviii, 328-333.
18. deSchweinitz: Therap. Gazette, Detroit, 1916, vol. 34, 685-692.

#### DISCUSSION

DR. W. H. LUEDDE: I regret very much that Dr. Sluder is not here. I had hoped that he might be, to open the discussion and present in a consecutive way the results of some of our observations in this class of cases.

It is a fact, as the essayists stated, that in years gone by many cases of ocular tuberculosis have simply been accepted as syphilis. I recall the remark that was made by Professor Voelckers, chief of the University Eye Clinic at Kiel, Germany, during my service there twelve years ago: "Well, we cannot be very sure about the diagnosis of ocular tuberculosis and a little mercury in the blood will probably help drive those bacilli off anyway, so we will just give them mercury." It happened during my service at Kiel, that, at the German Ophthalmological Congress at Heidelberg, Prof. von Hippel presented the second series of cases of ocular tuberculosis, which he had treated with tuberculin, in which the results had been so striking that the benefits of this treatment could no longer be denied.

Soon after Koch's discovery had been announced there was a rush to use this new remedy in cases of severe general tuberculosis. We probably know now why the results were so disappointing in that class of cases. Von Hippel had not despaired, but had persisted with the use of tuberculin in very much smaller, well controlled doses, and had succeeded in getting those remarkable results which he reported at Heidelberg.

On our return to Kiel we immediately began to test out the suspicious cases for ocular tuberculosis and were surprised to find how frequently we obtained positive focal reactions.

Later, in Paris, it was my privilege to follow some of the earliest work along this line, also inspired by von Hippel's results. The benefit of tuberculin treatment was established beyond a doubt in these ocular cases. In some of them there were relapses, but nevertheless great good was the result as these cases had been hopeless before.

On returning to St. Louis I used the tuberculin treatment in a number of cases with great satisfaction. The diagnoses were easily made by watching for focal ocular reaction. At that time we thought it was rather important to get a systemic reaction also. We believed, as they did in Europe, that the systemic focus was the primary and the principal one.

The ocular reaction may be a lowering of vision, as the essayists have mentioned. It may be the congestion of an inflammatory focus that is apparently very slight. It may be an increased infiltration, or a breaking out of new tubercles at the margin of the original lesion. We found soon that it was not desirable to have the focal reaction as strong as that. We preferred not to have a new area invaded by tubercles, because in the eye each of these invasions meant further loss of sight.

I would like to impress one point in connection with ocular tuberculosis. The lesions which we see in the ocular tissues are often so small that elsewhere in the body they would be entirely insignificant. Such lesions occur, probably, in the lungs of all who are exposed to tuberculosis and are never noted because they produce practically no systemic reaction. They may be discovered at autopsies as tiny calcareous nodules. In the lungs such lesions may be perfectly harmless. In the eye they would be harmless, too, so far as their effect on the general health could be measured, yet the damage to sight by ocular tuberculous lesions demands attention. They are peculiarly favorable for the use of tuberculin on account of the small size of the lesion and the fact that the patient is not already intoxicated with the toxins generated by tubercle bacilli in advanced pulmonary infections.

I would like also to refer to the possibility that the primary cause of tuberculosis in the eye is not always a constitutional or pulmonary infection, as had been thought.

Stock, I believe, in order to prove that constitutional tuberculosis might be the cause of ocular tuberculosis, injected tubercle bacilli into the veins of a cat's ear and noted that sometimes the kidney or other organs and sometimes the eye showed metastatic tuberculosis. We know that in the latter stages of miliary tuberculosis and sometimes in the earlier, in the meningeal form, tubercles may be found in the choroid. In vague forms of fever which are sometimes confused with typhoid, it may be that finding tubercles in the eye leads to the change of the diagnosis from "possible typhoid" to "probable miliary tuberculosis." That is not the type of cases with which we are concerned here. They are usually moribund and the diagnosis is only an interesting matter. The treatment of such cases is very unsatisfactory.

Bock, some four years ago, in his inaugural dissertation as docent, collected some 400 cases of ocular tuberculosis, observed during the last sixteen years at the clinic at Marburg and found that out of these 400 cases less than half showed any constitutional manifestation. That finding suggested very strongly that there must be some other point by which tuberculosis could reach the eye. Bock, however, supposed it must be some bronchial gland that would

break down occasionally when a patient had a fresh cold and thereby produce the condition in the eye.

My first case in which ocular tuberculosis seemed directly traceable to a nasal condition came under my care nine years ago. He was a school teacher and stated that when he was studying in college he suddenly, after a cold in the head, lost central sight in one eye. About three or four months before I saw him, following another cold, he had lost the central vision in the other eye. He had been treated by an oculist near the town in which he lived for syphilis but he was very sure he did not have syphilis. The Wassermann was negative. After examining his eyes I continued the treatment on the principle of Prof. Voelcker. I had a nasal examination made because he said each attack came after a "cold." The nasal examination was negative, but Dr. Sluder suggested watching him for a while. The next step was to send the man to Dr. L. M. Warfield for investigation as to possible tuberculosis. Dr. Warfield found no sign of tuberculosis. He made tuberculin injections but there was no general systemic reaction. There was a focal reaction in the eye, a lessening of vision, and a fresh hemorrhage in the choroid of the eye recently involved. The patient noted that vision began to be better in the other eye a day or two after this injection. That eye had an old macular retinochoroidal scar. There was an improvement in vision from 16/120 to 16/75—a distinct improvement.

Dr. Sluder had been watching this case but did not know what was being done. The day after the injection of tuberculin Dr. Sluder reported discharge from sphenoidal sinus on right side (right eye most recently attacked). I made note on the record but did not connect this fact with the effect of the injection. There was no further secretion in the nose. The patient was sent home and directed to take a little more mercury. We had made a few tuberculin injections, but he could not stay for a longer treatment and the matter was dropped. He returned with ocular conditions worse. The mercury by that time was causing gastric disturbance. I now gave small doses of tuberculin, regularly, with the result that the eye improved and the case went on to apparent cure, the scar also becoming smaller.

Another case presented itself about that time, or a little later, at the O'Fallon Dispensary in which there was a very great amount of swelling in the fundus of one eye at the posterior pole involving the optic disk. There was complete absence of central vision—eccentric vision was about 3/75. The vision of the other eye was normal. All manner of physical and laboratory tests, including a Wassermann were made. We sent him to the neurological clinic in search for a possible brain tumor. All reports were negative, and he was apparently a healthy young man, aged 19.

The last thing to be done was to try the tuberculin test. It happened that about this time I reviewed the history of the former patient to get some line on the case, since it was similar and did well under tuberculin. I was then impressed with the fact that we had obtained this sphenoidal reaction following tuberculin injection. I therefore sent this boy to Dr. Sluder for examination before injecting the tuberculin. The injection was followed by a positive focal reaction in the ocular fundus and in the sphenoidal region on the same side of the nose as the eye involved. That case, under simple tuberculin treatment, went on to a cure with final vision something like 20/75.

These cases could be multiplied as the essayists have done. An interesting thing is that we have not merely discovered a simultaneous reaction in the nose with a reaction in the eye but that it is usually on the same side. The essayist has brought up the point that this reaction in the nose would occur in



healthy noses. We have tried tuberculin in cases which proved afterward to be syphilitic without any focal reaction in the nose or eye. We have tried the same test in cases where the condition was old and by no means likely to be active, and we have found negative reactions in the eye and nose. We have not had positive reactions in all cases. I do not believe we are any more likely to get positive reactions in a nasal mucosa which is entirely free from tubercle bacilli than we are to get systemic reactions where there has been no tuberculosis.

More significant than the presence of a nasal reaction is the fact that we have in two cases stopped the tuberculosis process in the eye by nasal treatment.

One of these cases has been published in a report on "Ocular Tuberculosis of Nasal Origin" in the *Annals of Ophthalmology*, January, 1916.

In that case tuberculin treatment had been used with success during previous attacks but the patient was now so sensitized that  $\frac{1}{500000}$  mg. seemed to be followed by an unpleasant reaction. The tuberculous choroiditis continued unchecked until both sphenoidal sinuses had been obliterated by Dr. Sluder's operation. In the second case which has not yet been published, a tuberculous keratitis which had yielded temporarily to treatment with tuberculin continued to suffer relapses until tuberculin was no longer effective without severe general reaction. The use of nasal treatment under direction of Dr. Sluder and later the obliteration of the sphenoidal sinuses by his method of operation completely checked the ocular inflammation. Vision was greatly improved to the extent of producing some diplopia through the improvement in one eye which had been considered hopelessly lost. This case has been under the joint treatment and observation of Dr. Green, Jr., and myself for about eight years. The improvement following the operation of the nose was so striking that I think Dr. Green's skepticism as to the significance of sinus reactions in ocular tuberculosis has had a severe jolt if it has not been entirely overcome.

The essayists are to be congratulated on the excellent team work they have displayed both in the presentation and investigation of these cases. It has been intimated that the reaction might be more apparent to one who is looking for it. However, in the eye the focal reaction can be measured accurately by tests of vision and ophthalmoscopic measurement. For the latter, the ocular micrometer of the Gullstrand ophthalmoscope is particularly valuable. In the cases I have followed, the nasal observation has been made by Drs. Greenfield Sluder, F. C. Simon, W. M. C. Bryan, Roy Scholz, and others. The scientific accuracy of these gentlemen is sufficient guarantee that they have recorded what was actually present.

DR. BOISLINIERE: Who, after listening to the papers that have been read and the discussion so far, can have any reasonable doubt as to the specificity of tuberculin and of its inestimable value in the diagnosis and treatment of tuberculous foci, not only in the eye, but wherever they may be localized in the body? The papers that we have heard and the cogent and analytical discussion thereof have not been the presentation of pet theories or a congeries of jumbled observations loosely interpreted, but a careful coordination of many observations by keen, scientifically accurate specialists whose deduction and establishment of certain facts therefrom are logical and incontrovertible, because every conclusion arrived at is abundantly contained in the precedent proved and completely established premises. Besides these are the observations and conclusions not of one man, but of several investigators working together and separately. When such a combination occurs it behooves us to sit up and listen. It was particularly gratifying to me as my faith and confidence in the accurate

and scientific use of tuberculin in the treatment of tuberculosis is amply confirmed. Time and time again have I encountered and seen focal reactions in the throat, in the nose, in the mouth, in the cervical glands, after a therapeutic and sometimes a very small dose of tuberculin, and time and time again have I seen these conditions disappear under its continued use. On occasions, my first intimation that there was a laryngeal involvement was a focal reaction that called attention thereto. In the treatment of pulmonary tuberculosis, as in ocular tuberculosis, the focal reaction at the site of the lesion is your most important guide. By a precise knowledge of the geographical location of the lesion in the lung, and by auscultating carefully over that place before and after every dose of tuberculin, you can estimate with a very fair degree of accuracy just what is going on; not so well as where the lesion is visible, but it is your best guide as to frequency and amount with which tuberculin should be given. The focal reaction is the evidence of action and interaction between the specific antibodies, elicited by tuberculin, and the endotoxins and exotoxins of the tubercle bacilli at the site of infection. It is specific in character. You can get a focal reaction by the use of hetol, a cinnamic acid preparation, as evidenced by increased moisture in the involved area, but this is nonspecific, and, however much good it may do by determining the presence of phagocytes, it will not cause the disappearance of the tuberculous lesion. It is nonspecific. The *sine qua non*, therefore, in the treatment of tuberculous foci, is to bring specific antibodies to that site. Nature may do this unaided, but in the light of our present knowledge of the subject our patients should not be deprived of a method so beneficial and so innocuous. Again I say that this symposium, more than any other that I have ever heard, has proved beyond peradventure of a doubt the great value of tuberculin. I say this without reservation, for there are now too many therapeutic nihilists abroad in the land who depend solely on rest, air and diet in the treatment of tuberculosis.

DR. CHARLES S. REHFELDT: What explanation, if any, could be offered for so many positive von Pirquets being presented in these cases in contrast to the number found in other tuberculous lesions—say that of the lungs?

DR. MONTE M. MEYERS, closing: With reference to the point that Dr. Rehfeldt brought out, namely, an explanation of why so many von Pirquets are positive in these cases and not so in the lungs, I might state in a general way that probably it is because the lung, being so remote and not directly to be seen, may have some reaction which might not give rise to symptoms or signs that could be determined by the ordinary methods of physical examination, that is, by auscultation, percussion, or any of the measures we resort to for the determination of such lesions; whereas, in examining the nose and sinus regions the changes are readily visible and you cannot be far wrong in observing them, since the ocular determination of any lesion is perhaps more specific. These conditions, plus the difference in degree of involvement or the difference in the intensity of the disease in different individuals, plus those individual characteristics or idiosyncrasies that certain people have, possibly would account for the fact.

In answer to the question of Dr. Lyter, why the reaction occurs after the administration of such a small dose of tuberculin, probably the same thing could be said; that is, the degree of intensity in some of these cases is quite great, and an exceedingly small dose would bring about the reaction. Again, the lung might resist owing to the formation of cicatricial tissue during the healing of certain lesions, which tissue would be more resistant than normal lung tissue. Dr. Boisliniere, if I understood

him correctly, stated that he has gotten positive results from small doses of tuberculin.

DR. F. O. SCHWARTZ, closing: Concerning Dr. Rehfeldt's question in regard to the positive von Pirquet, it may be that a very careful, close examination over a period of three or four days, has been a factor in its determination. Then, too, we endeavor to ascertain whether there is even the slightest reaction. A violent reaction is unnecessary. However, we do not depend entirely on the von Pirquet test for the diagnosis, but depend on the reaction following a dose of tuberculin. If we have a lesion in the eye which corresponds to the size of a pin point, a small tubercle in the choroid or a spot in the cornea, there is no necessity whatever to increase this area by giving a very large dose of tuberculin, when the reaction is the only thing in which we are interested.

DR. BOISLINIERE: I would like to ask if the real reason why we get a more pronounced reaction in the eye from a much smaller dose of tuberculin than when the lesion is situated elsewhere, is not this: On account of the intense vascularity of the eye, the tuberculous focus in it is extremely accessible to the circulation and consequently to the specific antibodies also. The intensity of the focal reaction is directly proportional to and dependent on these two factors, whether the lesion be in the eye or in the lung. In the lung there is always more or less avascular tissue in the region of the lesion, consequently a larger dose is required to elicit a focal reaction there.

DR. SCHWARTZ: Not only that, but also we can see the eye and cannot see the lung. We can see our reaction. Where you have to make yours out by auscultation or percussion, we can make ours out by means of the ophthalmoscope. These reactions are not at all violent. As Dr. Luedde pointed out, a little increase in the infiltration, an exacerbation of the symptoms, a lowering of vision, or something like that is all the reaction may amount to.

#### THE COMPLEMENT FIXATION TEST FOR TUBERCULOSIS AND THE WASSER- MANN TEST IN PULMONARY TUBERCULOSIS\*

GEORGE IVES, M.D.

AND

J. J. SINGER, M.D.

ST. LOUIS

Notwithstanding the fact that we have numerous means of gaining diagnostic information in tuberculosis, we must be impressed by the fact that in a great many cases a positive diagnosis cannot be made at the desired time. This is true because history, symptoms, signs and roentgenological findings do not furnish positive evidence of clinical tuberculosis. Even so-called typical tuberculosis may be imitated by other conditions. The necessity for specific tests is well recognized. Histological, bacteriological and tuberculin tests furnish, with more or less definite limitations, specific evidence of tuber-

culous infection. In the clinical diagnosis of pulmonary tuberculosis, histological evidence cannot be obtained, so we are limited in present practice to only two specific tests, viz., the search for tubercle bacilli and tuberculin tests.

These well-tried tests have a very limited field of usefulness. Writers on pulmonary tuberculosis have stated that the only *positive* evidence of the condition is the presence of tubercle bacilli in the sputum. Known facts require that even this opinion be more or less modified. Since it is the usual practice to consider as tubercle bacilli all acid-fast organisms which are observed, it should be mentioned that this practice may lead to errors in diagnosis, because acid-fast organisms other than tubercle bacilli may occur in sputum. It has been stated by more than one authority that tubercle bacilli may occur in sputum without clinical tuberculosis. It has been suggested that cases of this type are tuberculosis carriers. The value of sputum findings is further minimized by the fact that in early tuberculosis, the stage in which serious consequences are likely to result to the patient if the diagnosis is delayed, few patients expectorate the bacilli; and further, by the fact that frequently in more advanced cases the sputum examination is negative. In our series of fifty-nine clinically tuberculous patients the bacilli were not demonstrated in forty cases (67.8 per cent.).

Tuberculin has a field of usefulness as a specific diagnostic test; but in many cases it is of no value. There seems no justification for applying it as a routine test. The extreme delicacy of tuberculin tests and the possibilities of harm resulting from the application of tuberculin diagnostically seem to justify conservative estimates regarding its place as a diagnostic aid. It cannot be too strongly emphasized that tuberculin is not an accurately standardized product, and that different preparations of the same tuberculin may vary in potency within considerable limits. As a diagnostic aid tuberculin has a particularly narrow field of usefulness in suspected pulmonary tuberculosis.

Since the manifestations of tuberculosis are of such protean character "that any disease which does not permit of a definite diagnosis may be suspected to be of tuberculous origin,"<sup>1</sup> and since many tuberculous affections remain unrecognized after the application of all well-tried diagnostic methods, the desirability of a serological test for tuberculosis, which will be equally as useful in tuberculosis as is the Wassermann test in syphilis, is evident. It would appear that in the work of Miller and Zinsser<sup>2</sup>

1. Von Ruck, S.: The Recognition and Treatment of Occult Tuberculosis, Southern Medical Journal, 1916, ix, 595.

2. Miller, H. R., and Zinsser, H.: Proceed. Soc. Exper. Biol. and Med., 1916, xiii, 134; Miller, H. R.: The Clinical Value of the Complement Fixation in Tuberculosis, Jour. A. M. A., 1916, lxxvii, 1519.

\* Read before the St. Louis Medical Society, May 26, 1917.  
\* From the Tuberculosis Clinic of the Washington University Medical School and Dr. George Ives' Clinical Laboratories, St. Louis.



such a test has been nearly perfected. Their optimistic views regarding the test as performed by them are shared by Craig,<sup>3</sup> and our work further supports these views.

Bordet and Gengou,<sup>4</sup> the discoverers of the phenomenon of complement fixation, were among the first to demonstrate antibodies in tuberculosis by the method of complement fixation. Neither the results of these workers nor that of Wassermann and Bruck<sup>5</sup> and others, was of such a nature as to offer a valuable diagnostic test in tuberculosis. The report of Besredka<sup>6</sup> in 1914 and probably the reports of McIntosh and Fildes<sup>7</sup> and of Radcliffe<sup>8</sup> stimulated the recent more successful work on this test. Besredka used as antigen a special tuberculin which others have not been able to prepare successfully; this latter fact coupled with the non-specific reactions which he obtained in syphilis prevent the general adoption of his antigen. Craig<sup>9</sup> used a modified Besredka antigen and

petent examiners will disagree on a diagnosis of clinical tuberculosis in a certain number of cases, we wish to emphasize that our clinical diagnosis would probably not be accepted as correct by others in every instance; hence we do not maintain that the clinical diagnosis is an absolute criterion on which to judge the reliability of the complement fixation test. The data on which we base a diagnosis of clinical tuberculosis are obtained from the history, temperature and weight records, physical examinations, sputum examination, and Roentgen plates. We interpreted the information gained in this manner as is the custom among most of the authorities on tuberculosis, and hence this feature does not deserve detailed discussion. It should be noted, however, that we have included under clinical tuberculosis individuals who are apparently well, but who showed certain definite pathological lung changes, and who have had toxic symptoms within the past three years.

SEROLOGICAL AND BACTERIOLOGICAL EXAMINATIONS IN 100 CASES FROM A CLINIC FOR PULMONARY TUBERCULOSIS

	No. of Cases	Complement Fixation Test for Tuberculosis				Wassermann Test			
		+	% +	—	% —	+	% +	—	% —
Clinical Pulmonary Tuberculosis.....	59	55	93.2	4	6.8	17	28.8	42	71.2
Suspected Pulmonary Tuberculosis.....	27	10	37.0	17	63.0	6	22.2	21	77.8
Other diagnoses.....	14	1	7.1	13	92.9	0	0.0	14	100.0
	100		66.0		34.0		23.0		77.0
Clinical Tuberculosis Negative Sputum.....	40	38	95.0	2	5.0	15	37.5	25	62.5
Clinical Tuberculosis Positive Sputum.....	19*	17	89.4	2	10.6	2	10.6	17	89.4

\* Tubercle bacilli were demonstrated in 32.2 per cent. of the clinically tuberculous cases.

reported favorable results, but his antigen is difficult to prepare and it is unstable. Miller and Zinsser have made the most valuable recent contribution to the subject in that they have devised a simple method for the preparation of antigen which makes possible the general application of a test for tuberculosis that in their hands gave diagnostic and prognostic information in tuberculosis equal to the information afforded by the Wassermann test in syphilis.

The table shows that we have classified our cases as clinical tuberculosis, tuberculosis suspects, and other diagnoses. As different com-

Since the complement fixation test presumably recognizes only cases of active tuberculosis, and since in our classification clinical tuberculosis is not necessarily *active*, it is evident that our classification for the purpose of this study is subject to criticism. We allow the classification to stand with the statement that only one of our clinically tuberculous cases did not show evidence of active disease at the time of the test. This patient gave a negative reaction and hence reduced the percentage of positive reactions in the group under which he was classified.

Tuberculosis suspects are those in whom we found indefinite toxic symptoms and slight or no pathological findings in the lungs.

The table shows that we have studied 100 cases, 59 of whom were classified as clinical tuberculosis. Of the 59 cases, 55, or 93.2 per cent., gave a positive complement fixation test for tuberculosis; 4 cases, or 6.8 per cent., gave a negative reaction. We present the following brief data on the four negative cases:

3. Craig, C. F.: Complement Fixation Test in the Diagnosis of Tuberculosis, Jour. A. M. A., 1917, lxxviii, 773.

4. Bordet and Gengou: Compt. rend. Soc. de Biol., 1903, cxxxvii, 351.

5. Wassermann and Bruck: Deutsch. med. Wchnschr., 1906, xxxii, 449.

6. Besredka: Ztschr. f. Immunit., 1914.

7. McIntosh and Fildes: Lancet, London, 1914, ii, No. 8, 485.

8. Radcliffe: Lancet, London, 1914, ii, No. 8, 488; Jour. of Hygiene, July, 1915, 36.

9. Craig, C. F.: Observation upon Complement Fixation in the Diagnosis of Pulmonary Tuberculosis, Amer. Jour. Med. Sc., 1915, cl, 787.

CASE 1.—M. B., aged 48, gave a history of considerable loss of weight, fever, cough and night sweats. There was marked involvement of both lungs. The Wassermann test and the sputum examination were negative. The complement fixation test for tuberculosis was performed once and was reported negative. The patient was very ill. He also suffered from tuberculous laryngitis and severe diabetes mellitus.

CASE 2.—H. M., aged 37, gave a history suggestive of tuberculosis. Physical examination and plates showed involvement of both apices. The sputum was negative. The complement fixation test was performed once and was reported negative. The Wassermann test was positive (3 plus). The patient had spent about one year in a sanatorium and at the time of his examination he felt perfectly well. In view of the positive Wassermann test, the negative sputum, and the apparent good health of the patient, some doubt as to the correctness of this patient's classification seems justified. At any rate, as it was not a case of clinically *active* tuberculosis, a positive reaction was not to be expected.

CASE 3.—M. P., aged 25, showed definite involvement of both upper lobes. The patient was too ill for Roentgen-ray exposure. The sputum was posi-

in 66 cases. If a positive complement fixation test as performed by us indicates active tuberculosis, as we believes it does, then it would appear that by the application of this test alone more cases of tuberculosis may be recognized than may be recognized by a combination of all the means which clinical experts are able to apply. It is not our purpose to depreciate the proper valuation of other data available in the diagnosis of tuberculosis. The complement-fixation reaction gives no data regarding the location and very meager information regarding the extent of tuberculous foci in the body. A positive reaction without clinical data gives no *prognostic* information. Even if future experience proves the test to be as reliable as we believe it to be, there will be no justification for a neglect of the art of physical diagnosis. Clinical data furnish the chief, but not the only, criteria on which the reliability of the reaction is based.

SCHEME FOR COMPLEMENT FIXATION TEST FOR TUBERCULOSIS

Tube	.85% NaCl Solution	20% Pt's Serum Inactivated	Antigen	5% Guinea-Pig's Serum	Incubated in water bath at 37-39° C. for one hour	2 Units Amboceptor*	2.5% Sheep's Corpuscles
1	.25 c.c.	.25 c.c.	0	.25 c.c.		.25 c.c.	.25 c.c.
2	0	.25 c.c.	20% .25 c.c.	.25 c.c.		.25 c.c.	.25 c.c.
3	0	.25 c.c.	10% .25 c.c.	.25 c.c.		.25 c.c.	.25 c.c.
4	0	.25 c.c.	7.5% .25 c.c.	.25 c.c.		.25 c.c.	.25 c.c.
5	0	.25 c.c.	5% .25 c.c.	.25 c.c.		.25 c.c.	.25 c.c.

\* The unit of amboceptor is estimated after an incubation period of 15 minutes.

tive and the Wassermann test was negative. The complement fixation test for tuberculosis was performed once and was negative.

CASE 4.—C. D., medical student, aged 26, gave an indefinite history which suggested tuberculosis. Physical examination gave rather indefinite findings. The sputum was reported positive once by a member of the resident staff of the Barnes Hospital. The Wassermann test was negative. The complement test for tuberculosis was performed once and was reported negative. Without the one positive sputum report the case would have been classified among the tuberculosis suspects.

It will be observed that out of 59 cases classified as clinical tuberculosis we obtained a negative reaction in only two cases who were unquestionably suffering from active tuberculosis. Both of these cases were very ill, a fact which in itself may prove to have an influence on our interpretation of negative reactions.

It is interesting to note that of the 40 cases of clinical tuberculosis with negative sputum, 95 per cent. gave a positive test.

It will be observed that a clinical diagnosis of tuberculosis was made in 59 cases, and that a serological diagnosis of tuberculosis was made

We have in our series 14 cases in whom diagnoses other than tuberculosis were made. These cases serve as a control on our serological work. Of the 14 cases a positive reaction was obtained in only one. The clinical diagnosis was pelvic cellulitis. So far as known the pelvic condition may have been tuberculous.

The delay for fifteen years in the successful application of the Bordet-Gengou phenomenon to the diagnosis of tuberculosis was due in large part to the fact that suitable antigens were not used by earlier workers. For satisfactory results a proper technic is as indispensable as suitable reagents. The technic of the original Wassermann test without modification cannot in our opinion be successfully applied in the complement fixation test for tuberculosis. The technic of the test as we performed it is summarized in the scheme above.

After the reaction is complete as indicated in the tubes of the negative control case and the other negative cases, the tubes showing inhibition are centrifugated and the results recorded according to a numerical scheme in which 0



indicates complete hemolysis, 4 indicates complete inhibition of hemolysis, and intermediate degrees of inhibition are indicated by 1, 2 and 3, respectively. The following taken from our records indicates our method of recording results and how these results were interpreted:

Case	Result in Each Tube	Interpretation
1.....	01000	Negative
2.....	03210	1 plus
3.....	03321	2 plus
4.....	04331	3 plus
5.....	04444	4 plus

We desire to cordially thank Dr. Moyer S. Fleisher who furnished the excellent antigen which is the most essential factor in the test. Dr. Fleisher prepared his antigen in April, 1916, according to his own method and without reference to other methods of preparing antigens for the complement fixation test. This antigen seems to possess all the qualities which are desirable in an antigen, viz., it is self-sterilizing, it is stable, and it is strongly antigenic. It is our belief that future work will demonstrate that this antigen is superior to all others which have been proposed.

We are able, with Dr. Fleisher's permission, to give in his own words a description of his technic for preparing antigen: "Tubercle bacilli were isolated and grown from sputum according to Petroff's method. After the cultures were from 4 to 8 weeks old the organisms were scraped from the surface of the medium with a platinum needle (four to ten different strains were used in preparing each lot of antigen). These organisms were allowed to dry at 37 C. over night and then weighed. (We used 0.5 gm. of dried tubercle bacilli for each 100 c.c. of 0.85 per cent. sodium chlorid solution.) The dried bacilli were now ground in a large sterile mortar for from three to four hours. If the material became pasty and sticky we added 1 c.c. of sterile distilled water, rubbed this up until the material again became sticky and pasty and then repeated the addition of the sterile distilled water.

"After grinding from three to four hours we gradually added the required amount of sodium chlorid solution so that we had a 0.5 per cent. suspension of the ground tubercle bacilli. To this we then added an amount of 5 per cent. carbolic acid equal to one-tenth the quantity of the sodium chlorid solution."

The antigen which we have used was about 8 months old when we began our work. At the present time when the antigen is over a year old it is yielding results such as are included in this report. We have shown that the antigenic principle of Dr. Fleisher's antigen resides both in the suspended tubercle bacilli and in the clear fluid after the bacilli are removed. This clear fluid, although less antigenic than the entire suspension, is by itself a very suitable antigen.

It is not our purpose to discuss in detail the subjects of the association of tuberculosis and syphilis, the interpretation of the Wassermann test in tuberculosis, and the technic of the Wassermann test. These subjects are old enough to have allowed time for the expression of various and contrary opinions; they are subjects too new to permit of final settlement at the present time.

Hints and definite statements to the effect that tuberculosis in itself may provoke a positive Wassermann reaction are not uncommon in the literature of this subject. It is stated that with cholesterinized antigens non-specific positive reactions are more likely to occur than when other antigens are used in the test. Snow and Cooper<sup>10</sup> undertook to investigate this question. With cholesterinized antigens they obtained positive Wassermann reactions in 52 per cent. of 290 tuberculous cases; from other serological and from clinical data they concluded that 20 per cent. of their cases were syphilitic. Hence they concluded that 31 plus per cent. of their tuberculous cases who were not syphilitic gave positive reactions with cholesterinized antigens. The work of Petroff<sup>11</sup> supports that of Snow and Cooper, for the former states that "In a patient with tuberculosis a diagnosis of syphilis based on a positive Wassermann test using only the cholesterinized heart extract antigen is deceptive."

Ottenberg<sup>12</sup> states that "It is possible that some of the unfavorable reports on cholesterinized antigens in the literature are based on dosage relatively too great." Boas pointed out in 1913 "that if the usual rules of dosage are applied to cholesterinized antigen non-specific results are frequent" (Ottenberg). Our experience supports these views. We believe that if only one dilution of cholesterinized antigen is used in the test that that dilution should not be lower than 1 to 40. This is a higher dilution than was used by Snow and Cooper, McClure and Lott,<sup>13</sup> and Kolmer,<sup>14</sup> all of whom obtained non-specific reactions. We use in each test four dilutions of antigen (cholesterinized human heart extract), 1 to 15, 1 to 30, 1 to 60 and 1 to 120. By this method with every set of tests we obtain sufficient information regarding antigenic qualities of the antigen and also regarding its anticomplementary qualities in the presence of negative serums. We use complement 1 to 10. The amboceptor is titrated and three units, estimated by an incubation period of 15 minutes, are used. Weak positive reactions with 1 to 15 antigen are frequent, and they occasionally

10. Snow, C. G., and Cooper, A. T.: The Wassermann Reaction in Its Relation to Tuberculosis, *Amer. Jour. Med. Sc.*, 1916, clii, 185.

11. Petroff, S. A.: Serological Studies in Tuberculosis, *Amer. Review of Tuberculosis*, 1917, i, 33.

12. Ottenberg, R.: On the Reliability of the Wassermann Reaction, *The Archives of Int. Med.*, 1917, ix, 457.

13. McClure, C. W., and Lott, R. S.: *Amer. Jour. Med. Sc.*, 1916, cli, 712.

14. Kolmer, J. A.: *Infection, Immunity and Specific Therapy*, Phil. and London, 1915.

occur in the 1 to 30 tube. These are interpreted as negative. Our results are recorded and interpreted according to the scheme given in the above description of the complement fixation test for tuberculosis.

In our opinion, cholesterinized antigens, when properly used, are superior to all others. Craig<sup>15</sup> and many others accept the suitability of these antigens. As these antigens are widely used in a dose determined by the usual rules it is highly probable that at the present time numerous positive reactions are reported on non-syphilitic cases.

The table shows that 23 per cent. of our cases gave a positive Wassermann reaction. The reaction was positive in 28.8 per cent. of the clinically tuberculous cases. Jones<sup>16</sup> applied the Wassermann test to 251 unselected patients who presented themselves to the Public Tuberculosis Clinic of the city of Seattle. He obtained positive reactions in 29 per cent. of his cases. It will be observed that the results of Jones and those of ours are practically identical.

We believe from the evidence available that the incidence of syphilis is greater among the tuberculous than among the non-tuberculous sick. Our results lend support to the view that syphilis should be looked on as one of the predisposing factors in tuberculosis. We believe that syphilis lessens resistance to tuberculous infection and that it therefore predisposes to tuberculous disease. Clinicians of the past evidently realized the possible relationship between syphilis and tuberculosis.

#### CONCLUSIONS

1. A positive complement fixation test for tuberculosis as performed by us indicates *active* tuberculosis; hence the test affords valuable diagnostic and prognostic information.

2. With this test we obtained a higher percentage of positive reactions in clinical tuberculosis than would be obtained with the Wassermann test in an unselected group of syphilitics, or would be obtained by applying the Widal test to an unselected group of typhoid cases.

3. Tuberculosis and syphilis are frequently associated in clinic patients, and syphilis is probably one of the predisposing factors in tuberculosis.

We wish to thank Dr. George Dock for his courtesy in allowing us to use the clinical material for this work, and Drs. A. M. Frank and G. H. Reinhardt of the tuberculosis clinic for their assistance during the progress of this work.

Wall Building—Carleton Building.

15. Craig, C. F.: The Practical Application of the Wassermann Test, *Amer. Jour. of Syphilis*, i, 192.

16. Jones, W. R.: The Wassermann Reaction in the Two-Hundred Fifty-One Tuberculous Dispensary Patients, *Medical Record*, 1916, xc, 418.

## THE PREVENTION OF VENEREAL DISEASES

H. E. KLEINSCHMIDT, M.D.  
ST. LOUIS

The achievements of preventive medicine are numerous, yet because they have been brought about chiefly through unsensational methods, the world refuses to be thrilled by the results. There was a time when all inhabitants of England were divided into two classes, those who had smallpox and those who were going to get it. Today smallpox is almost a negligible quantity. Few laymen and some physicians have never heard of Walter Reed, yet his pioneer work in yellow fever has resulted in the saving of millions of dollars and thousands of lives annually. Typhoid fever is so unnecessary that the time will doubtless come when disgrace will attach to the community where it finds a foothold. Infant mortality has been markedly reduced and tuberculosis claims fewer victims per capita since the campaign of education directed against it was inaugurated. These are doubtless the chief reasons why the average life of the American citizen has been increased in the past decade by some three years.

*Tardiness of Attack of Venereal Diseases.*—Disease prevention is largely a matter of individualization if we may use the term; that is, the intelligent application of those remedies best suited to remove the cause of the particular disease attack. For a long time, no one has had the courage to undertake the eradication and control of a certain class of diseases which exacts its fearful toll of human life, domestic happiness, individual efficiency and social progress. The reasons for this tardiness are many. In studying the problem, it was found that this was not merely a question of medicine, but that it involved morals, social relations and time-honored prejudices. Hence the term "social diseases"; indeed it is not improper to speak of the general situation, referring not only to venereal diseases, but to the causes which were originally responsible for them as a "social disease" just as poverty, crime and some of our distressing economic abuses might be termed "diseases of society." This particular social disease, like most others, thrives in the dark. The "conspiracy of silence" concerning matters of sex and reproduction which probably originated in the Dark Ages was maintained by those who honestly but erroneously hoped to keep the minds of the youth pure and uncontaminated. A general apathy of the public and a hesitancy in even discussing the problem was another serious obstacle to overcome.

Still another unfortunate circumstance obstructing progress was the fact that this class



of diseases has been stigmatized as "shameful diseases," when as a matter of fact the disorder is not shameful, but only the immorality which originally caused it. Moreover, this so-called just punishment for disobedience to the laws of nature and society is visited upon the just and unjust alike; virtuous women and innocent children suffering even more severely than the male offender.

And, finally, the campaign for the control and eradication of these diseases has not been made before because the whole subject was shrouded in doubt and mystery. It is only within recent years that the organisms of gonorrhea and syphilis have been discovered while the introduction of salvarsan, the Wassermann reaction and the complement fixation test are still fresh in our memories.

*The New Era.*—However, the dawn of a new day appears. Everyone has noticed a general public awakening in regard to public health measures and especially in relation to the venereal peril. The light of publicity and candor is being turned on, driving before it those evils which flourish best in the dark and secret places. Parents and teachers are beginning to realize that the policy of silence has failed and are substituting correct, clean knowledge, based on biology and physiology and paying careful attention to the development of moral safeguards. Most of these changes may be traced directly to the campaign originated by medical men and have been brought about chiefly by considering venereal disease as a public health problem and by recognizing that the remedy consisted not in a simple system of sanitation, but depends largely on a healthy attitude of mind toward the subject of sex and reproduction. Organized movements fostered by physicians, lawyers, business men and others interested in social welfare, have been launched and are now systematically spreading the propaganda.<sup>1</sup> Then with the discovery of the specific causes, known methods of transmission and improved therapeutics, we were ready to undertake the great task of eradicating, at least of limiting the spread of these diseases.

Already a good beginning of the attack on venereal diseases has been made. For purposes of discussion, we might divide the methods of attack roughly into three departments, namely: educational, legal, and medical-social.

*Educational.*—The last few years have seen prudery discredited, and the public, without wincing, has faced the truth. Public sentiment has been jolted into action by learning the startling facts formerly so carefully concealed by the medical profession. It is true that the

too common, morbid sensational discussion and treatment of the subject has resulted in harm, but this has been heavily overbalanced by the good accomplished. Publicity must continue and with it an earnest effort to redeem the subject of sex from unclean associations and raise it to its proper high plane.

Sex instruction for the young and adolescent is a much debated subject. But the substitution of the question "How shall we teach?" for the query "Shall we teach" indicates a hopeful change of public opinion. Adolescents have a natural desire to learn of the processes by which life is transmitted. Learn they will and it is only a question as to whether that knowledge shall be given them by trained teachers and conscientious parents in a pure and noble way, or whether the information shall come from the street, by way of the foulest mouthed urchin, who is usually the most willing to hand out his misinformation freely and without price.

Education, of course, includes moral training and the establishment of proper social relations. When respectable women cease to condone the indiscretions of youth, so-called, and shall demand the same high standards from men, as those which they themselves observe, fewer "wild oats" will be sown and a cleaner manhood, morally and physically, will be the result, for it is unquestionably true that young ambitious men live up (to a certain degree at least) to the standards set for them by society.

*Legal.*—The materialistic tendency of continental Europe is well reflected in her legal attempts to stamp out venereal disease. Recognizing that the practice of prostitution is the most fertile field for the dissemination of these diseases, repeated and strenuous experiments have been made to regulate and control prostitution, all to no purpose, however, for *failure* is written in large letters across these various attempts. Those who study the subject of the medical control of prostitution declare the whole system a pitiable farce. Prostitution, especially that portion of it commonly known as "commercialized vice," is susceptible to no compromise. There is only one remedy for this evil and that is suppression. Any partnership of the state with the business of vice is unmoral, unsocial, and a flagrant inconsistency flaunted in the faces of those who have been taught to eschew the very temptations emphasized by the practice.

There has been passed by the legislatures of twenty-nine states and by the national Congress for the District of Columbia, a law commonly known as the Injunction and Abatement Law for Houses of Prostitution. It is a most effective weapon in that it strikes a blow not at the unfortunate women concerned, but at those who make a profit out of this nefarious business by

1. The Missouri State Social Hygiene Society, recently organized, has already begun activities and is planning good work for the future.

renting their property at inflated prices for purposes of lewdness. The legal procedure is simplified by placing its operation in the Court of Common Pleas. Briefly stated, it is employed in this way: Any citizen or district attorney armed with proper evidence may appear before the judge who shall declare the place said to be a house of prostitution, a nuisance, and shall enjoin those responsible for its operation and the owner of the property from continuing its use for that purpose. Failure to obey may result in confiscation of real and personal property, and the issuance of a permanent injunction against the house complained of. When intelligently used, the law has resulted not only in the abolition of the segregated district, but has placed an effective weapon in the hands of individual property owners, whose interests might be endangered by the encroachments of the forces of vice. It is regrettable, indeed, that this bill failed of passage in the legislature of Missouri, lacking just two votes, but it is to be hoped that in its next attempt, it will be championed especially by the physicians of this state who can see the advantage of such a law from the purely public health point of view, in addition to the social.

A much discussed legal measure which holds out a certain amount of hope is that of compulsory notification of all cases of gonococcus infection and syphilis. A helpful, honest cooperation between physicians and health departments in this regard would certainly assist in furnishing valuable facts and controlling foci of infection.

By far the most drastic legal measure thus far employed for the control of gonorrhea and syphilis is that enacted by the government of Western Australia. It not only provides for the free diagnosis and treatment of indigent cases, but demands that every person infected place himself under proper treatment until cured. No effort is wasted in reporting the cases by name, but the doctor is held responsible for each case. Heavy penalties serve to enforce these demands, and while it seems harsh and drastic, it must be granted that the rights of the people are best served in this manner. It also stops the advertisement and sale of medicines intended for venereal diseases.

*Medical and Social.*—Briefly then, the program consists mainly of two efforts: (1) building up and strengthening those forces which will best equip the youth in resisting the temptations of sex irregularity, and (2) removing those flagrant temptations which are deliberately planned to entice young men and women. But aside from this, the medical profession has an important part to play. The duty of discovering and treating infected individuals falls on us. If it is the function of a health department to

locate cases of contagious diseases, such as diphtheria, smallpox, scarlet fever, etc., why not hold the department responsible for locating the active carriers of gonorrhea and syphilis? A few enterprising departments have assumed this task. In New York City the Wassermann test is done without charge and without restriction, and 59,614 specimens were examined in 1914, of which 75 per cent. had been supplied by private physicians. Many state health departments offer Wassermann facilities, but it is not generally advertised and properly utilized by physicians. The splendidly equipped department in the state of Pennsylvania has comparatively few requests for this work from the smaller cities and rural districts.

The establishment of free clinics for indigent patients suffering with venereal diseases has passed the experimental stage and is now a proven success. Prejudice against the free treatment of these disorders is rapidly breaking down, especially as those who are responsible for these institutions and interested in the public health realize that this is sound preventive medicine. In the campaign of education against tuberculosis, numerous dispensaries and clinics were opened for the infected, not because it was hoped materially to reduce mortality from the disease by reclaiming those already suffering with the disease, but because it opened an opportunity for teaching them how to prevent the spread of the disease to others. The same principle applies to the venereal diseases with this important additional factor, to wit: every patient who is properly handled and treated becomes a disciple of the cause. The false notion often maintained by the patient and which probably led up to his misfortune, that syphilis can be easily cured and that gonorrhea is no worse than a bad cold, is replaced by the knowledge of the dire results of these diseases and he is equipped with facts painfully learned at first hand, which he will use in his intercourse with others who are inclined to joke about this serious matter. The Brooklyn dispensary has done pioneer work along these lines. The dispensary for the treatment of syphilis and gonorrhea is conducted with due regard to the privacy and feeling of the patient. He is impressed at the first visit with the idea that his welfare is being considered by those in charge. Records of attendance are carefully kept and a follow-up mailing system employed for those who are delinquent in attendance. Married men are urged to send their wives to the women's department for examination. The health department of New York assists by tracing the cases with active lesions to their places of employment and insisting on continued treatment. In the waiting room of the dispensary, the patient is bombarded with



appropriate and striking placards, charts, cartoons and other messages displayed on the wall all of which emphasize the importance of thorough treatment, and after his consultation with the doctor he is presented with a booklet, giving in concrete form some advice about the prevention and cure of the malady with which he is suffering. Venereal quacks of New York City reap a rich reward by preying on the ills and fears of men, and their advertisements were prominently displayed throughout the city in toilet rooms, public comfort stations and other places. Armed with authority from the health department the Brooklyn dispensary removed these objectionable advertisements and put in their places neat placards giving sound instruction to the venereally infected and offering advice through the department of health. Recently a unique experiment was tried. Coney Island, the favorite summer resort of New Yorkers, abounds in "health exhibits" conducted by charlatans for the purpose of creating and attracting business. This cue was followed by the sponsors of the Brooklyn Dispensary and a building prominently located in Coney Island was engaged, which had every outward appearance of the regulation quack health exhibit. Once inside, however, the visitor was greeted by an attractive exhibit of sex hygiene of a constructive nature. The results of improper and neglected treatment of gonorrhea and syphilis were strikingly illustrated by means of a series of large hand painted plates. Captions such as "What the quack says" contrasted with "What the facts are" were illustrated and elaborated in a most effective manner and a display of what the city department of health and the local Society of Social Hygiene is doing to fight venereal disease was given prominence. During the two months of this exhibit it was visited by more than 19,000 persons, and of those who consulted the attendant 183 were found to be infected. These were referred to private physicians or to the dispensary situated nearest their homes. A physician was in constant attendance ready to explain the exhibits and advise with those who needed assistance.

*Social Service.*—An almost necessary adjunct of the modern dispensary for venereal diseases is some form of social service. To send out into the community a syphilitic who has taken just enough treatment to rid himself of outspoken symptoms, is unjust to himself and to the uninfected. The quack accomplishes almost as much. An intelligent social worker, with a sympathetic understanding of human nature and a working knowledge of medicine can multiply the effectiveness of the medical staff wonderfully. In the gynecological department of the Boston dispensary, the social service and

follow-up systems are given credit for reducing the amount of wasted work in the clinic from 45 per cent. to 6 per cent. during the year 1915. In one venereal disease clinic, the average number of visits per patient was slightly over seven. After the establishment of a social service department this number was increased to twelve. At the syphilis clinic of Lakeside Hospital in Cleveland, figures are not obtainable, but it is the belief of the superintendent of that institution that the number of visits per patient has almost trebled since the introduction of social service. Even that is only half the story. A trained worker finds situations in the home, the workshop and in the private life of the patient which the attending physician would never discover, and which may be of extreme importance in limiting the spread of disease.

*Personal Prophylactic Measures.*—Under the heading of the medical attack on venereal disease, we must not neglect to mention personal prophylaxis. While silver nitrate and calomel ointments used for personal prophylaxis have undoubtedly been successfully employed under adequate supervision, as for instance in the army and navy, the adoption of these measures has not found much favor with the general public. It is not considered wise to create a false sense of security in the minds of immature boys, half-drunken men and careless and unscrupulous prostitutes by the simple application of what most would believe to be an infallible preventive. Unless the application is made within a reasonable length of time, after exposure, by a trained physician or carefully instructed layman, and according to the approved method, no reliance can be placed on its effectiveness and it would be wrong to advocate its promiscuous use. Aside from that, however, the chief objection is "based primarily on the public determination to safeguard something it holds far more precious than health, namely, the morals of the community."

*The Private Practitioner and His Share in the Program.*—Physicians are generally called upon to lead in any movement looking toward the conservation of human life and health, and though it is true, that the main beneficiary, the general public, seems least interested and urgent for improved conditions, it nevertheless devolves on members of the medical profession, whose ideals are supposed to rise far above sordid gain and whose expert knowledge places them in a strategic position for leadership, to engage in this mighty warfare against the venereal peril. The private practitioner can aid in a number of ways; he can supply, without exaggeration, those startling facts which will jostle the public out of its complacency; he can instruct the young and lend sympathetic

aid to those who have made of him a father confessor and he can, by his sane conservatism, counteract the damage done by cranks and peddlers of bizarre schemes for the immediate solution of the problem. By urgent and combined demands, doctors can also stir the departments of health into action and convince them of the necessity of furnishing those facilities for diagnosis, advice and treatment which it is the duty of the state to do. Wherever feasible, the practitioner can point out to directors of hospitals and dispensaries the gross injustice of discriminating against gonorrhea and syphilis, and can lend his aid in providing adequate treatment for that class "which we have always with us." More attention should be paid in private practice to the scientific diagnosis and treatment of the venereal diseases. Too often such patients receive haphazard and incomplete attention, greatly to their own detriment and that of the public. With the splendid opportunities and improved facilities of recent days, physicians owe it to themselves and to their patients to give the very best science and art have to offer. Many of us are inclined to shift all responsibility on the patient when he fails to follow prescribed instructions or disappears from our notice. But this spirit of *laissez faire* is to be condemned, because every physician is in a measure responsible for the public health and he realizes more completely than the careless patient what a menace such a patient is to society. If public institutions find it necessary and practicable to follow up their cases, surely the private practitioner is justified in doing the same without incurring the unjust charge of "pernicious activity" or solicitation. Finally, the physician has the unique opportunity of reaching young men and women in a manner peculiar to the profession. His counsel and advice are sought in matters which are not even trusted with the most intimate associate. Questions relating to the advisability of entering matrimony, the distressing sexual disorders of men, women and children are brought to him with an unbounded confidence in his judgment and sincerity. He dare not violate this secret trust, but is bound, whether it pains him or not, to give freely of his professional advice and human sympathy, looking toward the welfare of the race and the protection of those who seek his counsel.

Let us continue our efforts in this fight and recruit new forces from the lay public. It is not a hopeless strife, neither is it a millennial expectation, despite the time-honored, stale argument of the unprogressives that the social evil has always been with us and therefore always will be. Every important step civilization has ever made has challenged and overthrown this same obstruction.

607 Federal Reserve Bank Building.

## DRUG INTOXICATION \*

HENRY C. PARK, M.D.  
KNOBNOSTER, MO.

In view of the fact that the medical profession recognizes the necessity of a better and a more general understanding among the general public of the laws and means of a better sanitary condition than obtains at present, and mindful of the public indifference to drugs and drug intoxication and the necessity of the education of the public mind in reference to the indiscriminate use of medicines, a few thoughts along this line may be of interest. It has been estimated that more than 200,000 persons die annually in the United States from so-called degenerative diseases, and the mortality statistics compiled by the census bureau show that in the registration area there has been an increase of more than 100 per cent. in the deaths from diseases of the kidneys, heart and blood vessels in the past thirty years. While it is to be expected that the gradual decrease in the general mortality rate, particularly in deaths from readily preventable diseases like typhoid fever, smallpox, etc., would tend to lengthen the human life, and thus add to the number of deaths from these so-called degenerative diseases in advanced years.

Mortality statistics show that the greater proportion in the death rate from diseases of the kidneys, heart and blood vessels has been among persons who should be, and are generally considered, in the prime of life. This great increase in the mortality of persons between the ages of 40 and 60 years constitutes an unnecessary loss that is deserving of careful study. For many years it has been accepted as a fact that changes in the natural resistance of the human body may be brought about by intoxications, such as alcohol, tobacco, narcotic drugs and the various occupational poisonings that are attracting the attention at the present time. These several sources of intoxication have long been recognized, and considerable thought and attention devoted to their injurious effects. Their harmfulness was well known and some effort was made to combat their influence even back in the previous century, from which period the steady rise in mortality from degenerative diseases appears to date. An important source of intoxication to which altogether too little attention has as yet been given is suggested by the thirteenth census.

During the sixty years for which figures are obtainable on patent medicines, the values of products of this type increase from something over three million dollars to over one hundred and forty millions. In other words, while the

\* Read before the April meeting of the Johnson County Medical Society.



population of the United States increased something like 80 per cent., the value of these patent medicines and related products increased over 740 per cent. These figures, high as they are, represent only a portion of the expenditures by the American people for medicines of various kinds. It has been estimated that the American people expend annually upward of five hundred millions of dollars for medicine, and that the greater part of the medicine bought and used is not under the direct supervision of government experts or the medical profession, whose knowledge would tend to prevent harmful intoxications and evil results from the ingestion of medicine, the nature of which the user oftentimes knows absolutely nothing, and the use of which oftentimes is dangerously harmful. The frequent and excessive use of a number of inorganic compounds, such as mercury, lead and related metals, has been shown to be irritating to the kidneys and capable of producing chronic lesions. The changes produced by alcohol and narcotic drugs have been well recognized and considerable data available regarding the harmful effects of coal tar analgesic and several hypnotic products. All of the important and active medicaments must of necessity have harmful influences when taken indiscriminately and continued for a length of time. Quinin, for instance, is still used in rather large quantities. It was imported into the United States in 1913 in the form of bark to the total of two billion average doses, enough to give every man, woman and children from twenty-five to thirty doses during the year. This drug has long been known to produce a form of intoxication, accompanied by a roaring in the ears, dizziness, headache and nausea. The administration of large doses has been followed by marked persistent deafness and even blindness. The habitual ingestion of coal tar products is followed by a train of symptoms including destructive changes in the blood, a degenerative condition of the heart muscle, finally cardiac failure, cyanosis, low temperature and collapse.

In *The Journal of the American Medical Association*, Vol. 62, Pontius reports having seen a nervous woman, 45 years of age, who, on the advice of a friend, had for the past year taken 5 grain tablets of aspirin from three to ten times daily for neuralgic pain. Her mental condition when seen by a physician was similar to one addicted to the morphine habit. The coal tar hypnotics, like sulphonal and trional, may cause acute symptoms of poisoning, accompanied by ataxia, nausea, gastric pain and irritation of the kidneys. The occurrence of acute intoxication of patient from the ingestion of various drugs is sometimes ascribed to idiosyncrasy. As yet comparatively little is known regarding the principles underlying the undue activity of some drugs on some subjects. In

this connection we know that with some drugs, if long continued, the body will develop a tolerance or diminished sensitiveness to their action. This appears to be particularly true of narcotics and many of the cathartic drugs. These lead to the habitual consumption of these drugs, and their use, once commenced, is fraught with many difficulties. The amount of money expended for drugs in this country is out of all proportion to the real needs of the people, and in view of the increased mortality from degenerative diseases among persons who should be in the prime of life warrants a careful study of this habit of indiscriminate use of drugs. How are some of these evils to be corrected? It seems that legislation and present laws excuse the druggists from any responsibility along this line. We have no criticism to pass on the druggist, but we do consider the conscientious druggist our best friend; but when people can pass 50 or 75 cents over the counter and get a bottle of drugs they know absolutely nothing as to the chemical or physiologic action said drugs will have on their bodies, some one is to blame. I had a patient once who would go to sleep anywhere, sitting or standing, lost his appetite, flesh diminished and had become a total physical wreck before we found some half dozen 6 ounce bottles of an elixir bromide compound hid away in the barn, under the porch and wherever he could hide them. No one was able to tell where he procured this medicine. I had another case of a man who bought \$37 worth of acetanilid compound tablets in one year. He took them every day, until finally he got so weak and cyanotic that he had to have help. Nothing but drug intoxication, but it will kill him if he does not discontinue the use of it. These two cases are mentioned merely as examples of the enormous quantity of medicine some people can take and live, and also to call attention to the fact that such cases are oftentimes more common than we suspect.

---

*The Growth of Filtration Systems.*—It is an interesting fact that a very large number of cities which formerly used water without purification now have water-works filtration plants. In 1900 less than 2,000,000 people were using filtered water; in 1910 approximately 10,000,000 were using it, while at the present date about 20,000,000 people are served by filtration plants. In 1900 fifty cities were using filtered water, and in 1917 there were 781 cities thus supplied, a truly remarkable increase. Reliable data pertaining to typhoid show that the death rate has decreased at about the same proportion as filtered water has increased. This alone is sufficient reason for the rapid adoption of filtration plants by municipalities.—*The American City*, June, 1917.



ROBERT E. SCHLUETER, M.D.  
President Missouri State Medical Association, 1917-1918



# THE JOURNAL

OF THE

## Missouri State Medical Association

---

Address all Communications to 3517 Pine Street, St. Louis, Mo.

---

JULY, 1917

---

### EDITORIALS

#### OPTOMETRISTS AND CHIROPRACTORS UNMASKED

The recent disclosures of the reprehensible methods of optometrists and chiropractors in attempting to pass their bills at the last legislative session has torn from these would-be doctors the mask of respectability they have worn in public, and branded them as selfish seekers of special privileges and enemies of the people. The label will stick and forever bar them from the legislative halls of our state. Attorney-General McAllister, after investigating reports from various sources and examining the testimony of witnesses before the Grand Jury at St. Louis, publicly announced his conviction that there was crookedness in the optometry legislation, and Dr. Guy B. Mitchell, Representative from Taney County, has declared that he was given to understand that a thousand dollars awaited his acceptance as soon as he would agree to drop his opposition to the chiropractic bill.

The several thousand dollars optometrists admit having raised to push their bill through smells strong with the blight of boodle, for no such sum of money is necessary to the legitimate expenses of a campaign to pass or defeat any measure.

The investigation of the methods of the chiropractors in attempting to pass their bill is also rapidly approaching the point where this set of medical pretenders will be fully exposed with the possibility of indictments for bribery or attempts at bribery.

The Missouri State Medical Association and the one hundred county societies affiliated with it have at all times opposed the passage of these iniquitous measures; and we will continue to fight them and all other bills that would permit incompetent and unskilled persons to treat the sick and afflicted people of the state. We will fight to hold inviolate our present excellent health law, which requires that all persons who attempt to treat the sick shall be educated in a reputable medical college, be a graduate of such a college, be examined by the state board of health as to their knowledge and fitness to enter

this sacred profession, and obtain a license from the state board certifying that they have complied with the requirements of the statute. After that it is the business of the people whether they will be treated by the rubbers, the twisters, or the praying sisters, when their lives are threatened by disease, or call on the followers of scientific medicine to fight their battle for health. It is this law that the chiropractors, the optometrists, and other medical cults would emasculate.

In its fight to protect the people from charlatanism and fakery in medicine the Missouri State Medical Association has never raised a dollar, nor resorted to questionable methods, nor accepted help from boodlers and grafters, to defeat bad bills or pass good bills. We have purged our ranks by expelling many who have proved themselves unfit followers of the healing art and we will use every means within our power to assist the officials in prosecuting and convicting any person guilty of criminal conduct in connection with any legislation touching the health of the people. Any organization which attempts, directly or indirectly, to buy legislative enactments is a menace to the public good and ought to have its charter revoked.

---

#### ROBERT E. SCHLUETER, M.D.

Dr. Robert E. Schlueter was born in St. Louis on June 9, 1872, the son of Ernst Schlueter and Elisabeth Schlueter, nee Pullmann. His father died in 1881, at the age of 40, when Robert was only 8 years old, while his mother survived until Oct. 2, 1914.

Dr. Schlueter received his preliminary education at the St. Louis Public Schools and Toensfeldt's Educational Institute. When still comparatively young he entered the pharmaceutical profession as an apprentice, and graduated with honors from the St. Louis College of Pharmacy in 1891. Shortly thereafter he took up the study of medicine at the Missouri Medical College, from which he graduated, cum laude, in 1895. Immediately after graduation he became assistant to the late Dr. Theodore F. Prewitt, chief surgeon to St. John's Hospital. During several years following his graduation, Dr. Schlueter lectured on Pharmacy and assisted the professor of physiology at Missouri Medical College. He remained with Dr. Prewitt until the latter's retirement from active work at the hospital and as a teacher at Washington University Medical School in 1902. Then Dr. Schlueter became head assistant to the late Dr. A. V. L. Brokaw who had succeeded Dr. Prewitt. This relationship continued until 1903 at which time Washington University and St.

John's Hospital severed their connections, Dr. Schlueter remaining with the department of surgery at Washington University Medical School in several capacities until 1912, and again from 1914 to 1916. He has been visiting surgeon to the St. Louis City Hospital 1912 to 1916, and surgeon to several other hospitals of the same city. He is a member of the Surgeon's Club, a Fellow of the American College of Surgeons, a member of the Société Française d'Histoire de la Médecine, and a Fellow of the American Medical Association. In 1911 he was president of the St. Louis Medical Society, and before that date and since then has held positions on numerous important committees, as well as membership in the council of that society. For many years he was a member of the Board of Trustees of the St. Louis College of Pharmacy, and president of that institution from 1911 to 1913. For five years he has been a member of the Defense Committee of the Missouri State Medical Association, and during the last four years he was its chairman.

Dr. Schlueter was married on Sept. 19, 1916, to Miss Katheryn B. Weber of St. Louis.

He is the author of a number of articles on surgery and on medical history.

## MEDICAL MOBILIZATION AND THE WAR

In order to facilitate the mobilization of medical men for service in the war, the Medical Department of the Army is circularizing the medical profession directly and also through the medical organization, that is, through our county, state, and national associations. The following letter from the president and secretary of the American Medical Association is self-explanatory and has been approved by the executive committee of our association. County societies are therefore urged to respond to the request of the Medical Department of the Army promptly on receipt of the letters. The letter from the American Medical Association follows:

*To the Presidents and Secretaries of the Constituent State Associations and Component Medical Societies of the American Medical Association:*

The Medical Department of the Army is circularizing the medical profession with a view to presenting to each physician who is within the age limit, 55 years, an opportunity of offering his services as a member of the Medical Reserve Corps. We believe that the time is opportune for each county society to respond to its responsibility and privilege in connection with the mobilization of the medical profession for war. We, therefore, suggest, if your society has not already taken action on the matter, that you

call a meeting to consider questions immediately connected with this mobilization.

The county society should determine the number of physicians within its jurisdiction who are under 55 years of age and who of these are physically and professionally qualified for the service; also how many and who could be spared from their respective localities. Another important matter which should be considered and acted on by each county society is how the personal interests of the physicians who volunteer may be safeguarded by the society.

We urge you to appreciate the necessity of action in this matter. It is requested that after the meeting you will send a full report to the secretary of your state association, as well as to the secretary of the American Medical Association, 535 North Dearborn Street, Chicago. If your society has already taken action, it will be appreciated if this fact is reported to both these offices.

Very truly yours,  
RUPERT BLUE, President,  
ALEX. R. CRAIG, Secretary.

## SEVENTEEN THOUSAND DOCTORS NEEDED AT ONCE

From the Committee on Public Information at Washington we have received an announcement from Surgeon-General Gorgas of the Army, calling for more doctors for the army. The appeal is urgent and the need is great. The announcement follows:

The Medical Corps must have 17,000 more doctors for the army, and it needs most of them now. In Germany when the army has such a call the government orders the doctors to join the colors, and that is all there is to it. This government is loath to follow that example. Doctors coming into the Medical Officers' Reserve Corps are commissioned as first lieutenants, captains, or majors in the service, and are liable to be ordered to any duty required of their grade. The Surgeon General's endeavor is to put each man where he is most needed and where his specialty will count most.

### FOREIGN SERVICE THE ATTRACTION

Foreign service is the attraction, and it will eventually fall to most of the corps. The examination of recruits and the care of their health through treatment and in a much broader way by sanitation is the matter of earliest importance, and it will be the first duty of many of the new medical officers.

The United States needs more medical officers than France or Germany, because, through lack of universal military training, the difficulties of examining recruits will be multiplied many times, and because we wish to aid our allies and also give the best service to our own soldiers and sailors.

The country needs more doctors now that they may be trained in military ways, in sanitation, and in the surgical methods developed by Dr. Carrel and other surgeons since the war began.

### QUALIFICATIONS REQUIRED

An applicant must be a graduate of a reputable medical school and be between 22 and 55 years of age. The annual pay of a lieutenant is \$2,000; of a captain, \$2,400; of a major, \$3,000; with an additional 10 per



cent. in each case for foreign service besides quarters. Any physician who intends to join the Medical Officers' Reserve Corps should communicate with the chairman of the board most convenient to him.

Never has there been a greater demand for sacrifice, but it is the sacrifice for country. The country is in the war to win, and no class is more needed at the present time than doctors.

#### CONDITIONS IN ENGLAND

The surgeons of England and France need help both at home and in the field.

"English physicians have given themselves to the army so freely," says Col. T. H. Goodwin, R. M. C., "that in some of the more populous districts there is but one physician for 6,000 people left in England."

"The English surgeons have worked desperately. They frequently, after great military engagements, keep their boots on for a week at a time, working fourteen to sixteen hours a day. But they have learned their lesson; and where at the war's inception they detailed twenty medical officers and assistants to care for the sick and wounded in 500 beds, now with the aid of two more officers they give equally good care to a thousand."

Colonel Goodwin, who has been through the war, beginning with the first expedition to France, and the great retreat from Mons, has been detailed to lend his great experience to the United States Medical Corps, and he unflinchingly advises the greatest possible number of medical officers at the earliest date. He flatly contradicts the story that 60,000 English doctors have lost their lives in the service, the total loss not being 2 per cent. of that number. There are only 12,000 surgeons in the English army.

#### ORGANIZATION OF THE AMERICAN ASSOCIATION FOR THE CONTROL OF SYPHILIS

There was organized at Cincinnati on May 23 and 24, the "American Association for the Control of Syphilis," the objects of the association to be the promulgation of knowledge of syphilis among medical men, medical institutions, boards of health, hospital boards, dispensary attendants and boards, and other organizations having the care and treatment of syphilis.

Those composing the charter membership hope to develop the important social and economic sides of this disease. Plans are also being made to collect standardized statistics from the various institutions now treating syphilis; to further the establishment of free clinics and dispensaries for the diagnosis and treatment of syphilis; and to encourage the more comprehensive teaching of syphilis in medical schools.

The association will operate through a national body and local branches in various cities, probably in close cooperation with the American Social Hygiene Association, the former to interest themselves in the purely medical side of the work which is not entirely covered by the latter association.

The membership of the association at present is composed of the following:

Dr. W. T. Belfield of Chicago  
Dr. Ernest D. Chipman of San Francisco  
Dr. W. T. Corlett of Cleveland  
Dr. Isadore Dyer of New Orleans  
Dr. M. F. Engman of St. Louis  
Dr. Marcus Haase of Memphis  
Dr. H. H. Hazen of Washington  
Dr. M. B. Hartzell of Philadelphia  
Dr. H. E. Kleinschmidt of St. Louis  
Dr. G. M. MacKee of New York  
Dr. E. L. McEwen of Chicago  
Dr. W. H. Mook of St. Louis  
Dr. H. Morrow of San Francisco  
Dr. J. A. Fordyce of New York  
Dr. H. J. Nichols of San Francisco  
Dr. Oliver Ormsby of Chicago  
Dr. Sigmond Pollitzer of New York  
Dr. W. A. Pusey of Chicago  
Dr. A. Ravogli of Cincinnati  
Maj. Matthew Reasoner of Washington  
Dr. J. F. Schamberg of Philadelphia  
Dr. Morton Smith of Boston  
Dr. W. F. Snow of New York  
Dr. H. W. Stelwagon of Philadelphia  
Dr. G. H. Walker of Baltimore  
Dr. Grover Wende of Buffalo  
Dr. Udo Wile of Buffalo  
Dr. J. M. Winfield of Brooklyn  
Dr. H. R. Varney of Detroit

The following officers were elected: Dr. M. F. Engman, President; Dr. J. F. Schamberg, Vice-President; Dr. H. E. Kleinschmidt, Secretary and Treasurer, 607 Federal Reserve Bldg., St. Louis, Mo. M. F. E.

#### CLINICS OF NORTH AMERICA

The publication of *The Medical Clinics of Chicago*\* will be terminated with the current issue (May, 1917) as a separate publication and be merged with a new venture to be called *The Medical Clinics of North America*. The first issue of the new publication will be presented in July and appear every other month thereafter. The *Medical Clinics of North America* will embrace the clinics of New York, Philadelphia, Chicago, Boston, and Baltimore. The material will be drawn from the Johns Hopkins Hospital, the University of Pennsylvania and the Jefferson Medical College, Columbia, Bellevue, Cornell, the Postgraduate School of New York, Harvard Medical School, Massachusetts General Hospital, Boston City Hospital, and Peter Bent Brigham Hospital.

The *Medical Clinics of Chicago* attained a permanent success from the appearance of the initial number, and the enlarged publication will undoubtedly find a very wide field of usefulness. Each number will be an octavo volume of 300 pages or more and devoted exclusively to the clinics of one of the centers mentioned. We are disappointed that the clinics in St. Louis were not included.

\* W. B. Saunders Co., Philadelphia.

## SEX HYGIENE EXHIBIT FOR RECRUITS AT JEFFERSON BARRACKS

Shortly after the order for mobilization was given, the Missouri State Social Hygiene Society began preparations looking toward the protection of recruits against venereal infection through educational means. It was thought that the most effective way of educating the men would be through a specially prepared exhibit on sex hygiene and the venereal diseases. Permission was first secured through Major Pipes, medical officer of Jefferson Barracks, to place the exhibit at that camp. A tent measuring 12 feet by 20 feet, with 6 foot walls was supplied by the St. Louis Public Health League and erected on the grounds near the Y. M. C. A. recreation tent. Along the mid-line of the floor of the tent a vertical wooden frame work was built and on it were suspended the pictures making up the exhibit. There are twenty-two of these placards each measuring 22 inches by 28 inches, suitably framed and artistically prepared, and arranged so that the visitor by beginning at No. 1 and following along in consecutive order, will have obtained a fair comprehension of sex hygiene and the cause, diagnosis, and prevention of venereal disease. The general arrangement of each placard is this: Above, in heavy black type, appears a question such as, "What is stricture and how is it caused?" or "When is it safe for one who has had syphilis to marry?" Below this question is an illustration under which appears the answer to the question and an explanation of the picture. The text is concise and easily understood. The illustrations consist of diagrammatic and anatomical drawings and photographs of actual cases and colored pictures designed to add to the interest of the exhibit.

Through the generosity of a friend, sufficient funds were secured to employ a young man to act as attendant. He is stationed at the tent each day where he answers questions, explains difficult passages and gives personal advice. He also distributes literature. Four specially prepared pamphlets are being used, "Sex Hygiene for Young men," by Dr. Belfield; "Friend or Enemy," by Dr. Exner; "Keep in Fighting Trim," American Social Hygiene Association; "Venereal Diseases," a reprint of the pamphlet published by the New York Board of Health. Some 200 men visit the exhibit daily, and it has the indorsement and commendation of the chief medical officer and of many physicians and social workers who have seen it. It was recently visited by an agent from the War Department who pronounced it the best he had

seen thus far in his tour of training stations and mobilization camps. Analyzing questions which are asked, it is quite evident that there is a woeful lack of correct knowledge on the part of young men, especially those coming from smaller towns, on this vital subject. Questions such as, "Does gonorrhea ever run into syphilis?" "Is 606 a sure cure?" "Is syphilis curable?" are asked with great frequency. Through the knowledge thus gained the society hopes to amplify and improve the exhibit so that it will meet the needs of the men.

Perhaps the most important mobilization problem is that of the prevention of venereal disease. While it is true that some men will not be restrained from sex license by the knowledge of sex hygiene, it cannot be denied that the facts obtained by this method will aid many recruits in practicing continence which, for the first time in history, has been recognized by the army and navy officials of a great nation as "the best safeguard against venereal infection." Moreover, by impressing those who are already or who will become infected, with the importance of early and thorough treatment, the spread of the disease will surely be limited. Anything which will keep a fighting man sound and healthy is of the greatest importance because a man who has been infected, no matter how mildly, is placed on the sick list and becomes a burden instead of an asset to the nation. Previous wars have invariably been followed by an increase of gonorrhea and syphilis among the general population. If the soldier can be sent back to his home with a sane knowledge of sex hygiene and a wholesome fear of the venereal diseases instead of with an infection acquired while in training, we may hope that history may not repeat itself this time.

This plan as carried out by the Missouri Social Hygiene Society is supervised by the American Social Hygiene Association, the only association in this field recognized by the National Board of Defense H. E. K.

---

## THE GRIDIRON CLUB

The gratitude of the St. Louis Medical Society is due the above named organization for the splendid program it produced last Saturday evening. It is safe to say that the meeting was unique in the history of the Society and will long be cherished as a pleasant memory by those who attended and a keen regret by those who failed to avail themselves of this opportunity of spending an evening with the best natured element in the Society.

Just who constitutes the Gridiron Club is guarded as a secret, so the thanks of those who



have the interest of the Medical Society most at heart must be limited in expression to those who took part in the program. The genius of Dr. Mook was plainly evident in almost everything that was done and he was ably assisted in carrying out his plans by Drs. Unterberg, Hurford, Buhman, Kerwin and Darrow. The exhibition of Dr. Darrow easily equalled that of the most famous professional sleight-of-hand artist.

He and his fellow gridironers have won permanent places in the hearts of those who are working for the success of the Society and it is hoped the time is not far distant when they will again give us a night of surprises.—*Bulletin St. Louis Medical Society.*

(For the enlightenment of the members at large, it may be stated that the lamb who was under the friendly fire of the gridironers on this occasion was the President of the State Association, Dr. R. E. Schlueter.—*Ed.*)

#### WANTED—NEWS ITEMS

From time to time members of our Association express wonderment that comment on the affairs of the profession of Missouri appear so infrequently in *The Journal of the American Medical Association*. The editor believes there are sufficient happenings in Missouri of a nature that would interest the profession throughout the country, but it is apparent that statements of fact concerning these happenings cannot be transmitted to the American Medical Association through our editor unless the information be given to him by reliable persons, that is to say, by persons who are familiar with the facts and can substantiate them when they are published, should any question arise as to their accuracy. The same attitude is of course maintained at headquarters in Chicago, where strict rules must be observed in order that no inaccuracies or objectionable items may appear in published statements. The editor of the *STATE JOURNAL* is exceedingly anxious not only to publish in the *STATE JOURNAL* but to transmit to *The Journal of the American Medical Association* news items and short comments of interest to the profession at large relating to the movements and activities of the profession of Missouri. If the members throughout the state, particularly in the large cities, will take an interest in this department of our work and forward items to our editor, it will add much to the general usefulness of the organization. Please do not send anonymous communications.

## OBITUARY

### CORNELIUS O'CONNOR, M.D.

Dr. Cornelius O'Connor, who had practiced medicine in Kansas City for thirty years, died at St. Joseph Hospital in that city, age 65. He was a member of the staff of the hospital and had been a leader in the activities of Jackson County Medical Society of which he was a member.

Dr. O'Connor was a graduate of the Kentucky School of Medicine, Louisville, 1885, and was a Fellow of the American Medical Association.

### LUTHER A. TODD, M.D.

Dr. L. A. Todd of St. Joseph, a graduate of Columbia University College of Physicians and Surgeons, 1900, died suddenly on an interurban car while returning to his home from Kansas City, May 22. Age 42 years. He had been suffering from an ear trouble and it is thought his death was due to a blood clot in the brain.

Dr. Todd was a former councilor of the association and had been active in organization work for many years. He was a member of the St. Joseph Board of Health at the time of his death, was surgeon for the St. Joseph and Grand Island Railroad, and an assistant surgeon for the Interurban Railroad Company. He was married in 1897 to Miss Ruth Hetherington of Kansas City, and is survived by his wife and three children.

### ROLLIN H. BARNES, M.D.

The friends of Dr. Rollin H. Barnes of St. Louis were grievously shocked, while in attendance at the meeting of the American Medical Association in New York, to learn of his sudden death on June 3, in that city, from appendicitis. Dr. Barnes was apparently in good health when he departed for New York. He was a graduate of Marion Sims Medical College, 1897, now the medical department of St. Louis University, and was president of the Alumni Association of that department at the time of his death. He was editor and owner of the *Proctologist*, a journal devoted to that specialty which he established several years ago in the face of much discouragement, and succeeded in producing a creditable publication for those practicing that branch of medicine. He was a member of the St. Louis Medical Society, the Missouri State Medical Association, a Fellow of the American Medical Association and a member of the American Proctological Association. At the time of his death he was a member of the medical staff of the St. Johns Hospital and a visiting physician at the St. Louis Infirmary.

## DAVID CLARK GORE, M.D.

In the death of Dr. David C. Gore, of Marshall, which occurred on the night of May 26, Saline County and the state at large has lost one of its most lovable and charming citizens, and the medical profession a physician of the highest type of professional character.

Dr. Gore was 65 years old at the time of his death. He was born in Paris, Monroe County, Missouri, the son of Dr. A. E. Gore, who had practiced at Paris for more than fifty years. He was educated at the Kentucky University, Lexington, Kentucky, and taught school for several years afterward. He then entered the St. Louis Medical School from which he graduated in 1876 and served as an intern at the St. Joseph Hospital. He practiced at Peirce City and Paris for several years, but in 1890 he settled in Marshall where he continued to practice until his death.

Dr. Gore was one of the most active members of our organization until his health began to fail several years ago, and even then was constantly in touch with the affairs of the organization. He was elected president of the Association in 1906 and served on many important committees at various times.

Dr. A. E. Gore, his only son, is one of the prominent physicians of Marshall.

---

REPORT OF THE NECROLOGICAL  
COMMITTEE ON THE DEATH  
OF DR. OTTO L. CASTLE

Your Committee on Necrology submits the following report on the death of Dr. Otto L. Castle, who died at his home, 3701 Madison Street, Kansas City, April 25, 1917, at 5:00 o'clock a. m., aged 33 years.

Should one of us older men die, no one would be surprised, as we have about fulfilled our destiny; but when a young man like Dr. Castle dies, we stand aghast, and ask the question: Why should it be? and no satisfactory answer comes. Words fail to picture the sad event, and I quote from a distinguished orator, whose words are as applicable in the present instance as they were when delivered at his brother's grave: "He had not passed on life's highway the stone that marks the highest point, but being weary for a moment, lay down by the wayside, and using his burden for a pillow, fell into that dreamless sleep that kisses down his eyelids still. While yet in love with life, and raptured with the world, he passed to silence and pathetic dust. Yet after all, it may be best. Just in the happiest, sunniest hour of all the voyage, while eager winds are kissing every sail, to dash against the unseen rock, and in an instant hear the billows roar above a sunken

ship. For whether in mid sea, or among the breakers of the farther shore, a wreck must mark the end of each and all. And every life, no matter if its every hour is rich with love, and every moment jeweled with a joy, will at its close become a tragedy as sad, and deep, and dark as can be woven of the warp and woof of mystery and death."

Dr. Castle was just reaching the plain where eminence awaited him. He was studious, energetic, courteous and kind, attributes of character which invite success. Dr. Castle was born at Pleasant Hill, Missouri, the son of a physician. He graduated from Central High School in 1905, received his medical degree from Michigan University in 1909. He has ever been active in local medical affairs. He was a member of the National, State and County Medical Societies, also the Western Surgical Society, Southwest Medical Society, and Pathological Club of this City, of which he was the organizer.

He was married to Miss Blanche Rosencrans in 1913, who with one daughter, Dorothy Blanche, survives him, also his mother and three brothers, to all of whom the Jackson County Medical Society extends the deepest sympathy.

H. B. COLEMAN,  
JOKSHAN FREYMAN,  
R. E. CASTELAW,  
Committee.

—From Bulletin Jackson County Med. Soc.

---

NEWS NOTES

DR. J. J. SINGER of St. Louis has been appointed an instructor in medicine at Washington University.

THE guns of medical fakers and charlatans are cast in the moulds of avarice and greed; their ammunition is boodle.

DR. J. J. BANSBACH has been appointed a member of the St. Joseph Board of Health to fill the vacancy caused by the death of Dr. L. A. Todd.

DR. C. B. FRANCISCO of Kansas City, who sailed about May 19 for France, has arrived in England. Dr. Francisco is orthopedic surgeon for hospitals at the front.

THE St. Louis University School of Medicine has established a special summer course for students. Those who take this course and pass the examinations will be graduated in February, 1918, instead of June, 1918.



DR. JAMES C. WELCH of Salem, a brother of Dr. Lee Welch, state senator, has been appointed physician at the State Penitentiary.

NEWS dispatches state that the Chicago Unit of American Physicians sent to Germany a year ago by the German-Austro Relief Committee has left Germany for Christiana. The unit was headed by Dr. Frederick Hagler of St. Louis.

THE war has, with its constant economic requirements in all walks of life, caused the people of Greene County to postpone the calling of a special election to vote bonds for the erection of the Greene County Anti-Tuberculosis Hospital.

BUCHANAN County Medical Society tendered a farewell dinner to its members who have been called to the front, on Tuesday, June 12. The members who will leave are Drs. O. C. Gebhart, Thomas Lynch, Charles Greenburg, Otto Schmid, Robert Crabtree, George M. Boteler, W. L. Kenney and A. S. J. Smith.

"FAKE" Doctor Gets Limit.—"I wish the law permitted me to give you more than a year in jail," Judge Latshaw said today in sentencing Louis Clermont, who pleaded guilty to practicing medicine without a license. Clermont was arrested in an office he maintained at 1907 Main Street. His "practice" consisted principally of writing prescriptions for narcotics. — *Kansas City Star*, May 21.

THE osteopaths have assiduously sought recognition by the War Department in the present conflict, and a rumor was current in one of the counties of the state that the War Department had recognized osteopaths for service in the Medical Department of the Army. When this matter was brought to the attention of the secretary of our association he telegraphed Surgeon-General Gorgas to know if the rumor was true, and if so, in what capacity osteopaths had been employed. The Surgeon-General responded as follows: "Rumor Absolutely Unfounded." (Signed) Gorgas.

ST. JOSEPH has discovered that her health officer believes in protecting the health of the people and in enforcing health laws. This preposterous attitude of the health officer is such an unusual thing for St. Joseph—according to news dispatches—that some of the people in a certain section of the city are vigorously seeking his removal. Dr. H. Delameter is the new health officer who is championing the cause for a clean city in St. Joseph. Fortunately, the mayor and other city officials are supporting Dr. Delameter, so we hope the cause of good health will triumph over its enemies.

THE Jackson County Medical Society has formulated a plan whereby its members will care for the patients of members called to the colors. At present it has been arranged to return 50 per cent. of the fees collected to the families of the absent physicians. Several other county societies have reported in their proceedings the adoption of similar plans to care for the practices of their absent members.

SEVERAL suits for alleged malpractice against our members have been decided within the last few weeks. Our defense committee has assisted our members in all these cases. One suit for \$25,000 for alleged improper treatment of a fracture of the femur was tried before a jury which brought in a verdict in favor of the doctor. Two suits were thrown out of court by the prosecuting judge when the doctors' attorneys demurred to the evidence, claiming that the plaintiff had no cause of action.

THE Abbott Laboratories have issued a neat pamphlet describing some of their products, with the slogan "Made in America." Of itself, this announcement would draw no comment from us because it is "all in the day's work," but what impels us to make special mention of the pamphlet is the fact that the company gives prominence to the announcement that the Council on Pharmacy and Chemistry have accepted certain Abbott products. The names of these products are given. Our members will appreciate this frank acknowledgment of the Abbott Laboratories' desire to conform to the rules of the organization in presenting their products to the profession. Their advertisement appears regularly in our JOURNAL.

THE St. Louis Medical Society's Committee on Defense of the Nation, whose duty it is to provide medical and surgical attention to the families of members called to the colors and correct defects in men who have been rejected by the recruiting officers, has furnished service to sixty-five persons in these classes. In this way a number of men have been made acceptable to the recruiting officers. The service included surgical operation, hospital fees and dressings, and were furnished free of all cost to the individuals or to the government.

Another committee of the society has furnished speakers to aid in recruiting for the Navy under the auspices of the Navy League of America. These speakers have addressed audiences in St. Louis and other parts of the state.

The society made a post-card inquiry of its members to ascertain how many would volunteer to care for the practices of absent members and their sentiment regarding the amount of

fee that should be returned. Within forty-eight hours after the card had been mailed, 407 volunteers responded, and four-fifths of them voted to return 50 to 100 per cent. of the fees collected.

DURING May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Non-proprietary articles: Calcium Cacodylate; Thorium Nitrate; Thorium Sodium Citrate Solution; Thorium Sodium Citrate Solution, Stronger.

Abbott Laboratories: Chlorazene Surgical Cream.

Anthony-Hammond Chemical Works: Betanaphthol Benzoate.

Armour and Company: Kephalin-Armour.

Borchardt Malt Extract Company: Borchardt's Malt Extract with Cascara Sagrada; Borchardt's Malt Extract with Cod Liver Oil; Borchardt's Malt Extract with Creosote.

Hynson, Westcott and Dunning: Thorium Solution for Pyelography, H. W. and D., 10 per cent.; Thorium Solution for Pyelography, H. W. and D., 15 per cent.; Sterile Ampoules of Mercury Salicylate, 1½ grains; Sterile Ampoules of Mercury Salicylate, 2 grains.

H. K. Mulford Company: Ampuls Calcium Cacodylate Solution-Mulford.

Synthetic Drug Co.: Diarsenol.

DR. HERMAN E. PEARSE was appointed health commissioner of Kansas City to fill the vacancy caused nearly a year ago by the death of Dr. Paul Paquin. Dr. Pearse accepted the position with the understanding that it was merely a temporary appointment in order that the city might have the services of a health commissioner until the board of health had chosen a permanent officer. After considering the applications and qualifications of several candidates, the health department has chosen Dr. William Hall Coon, one of the executive officials of the division on infantile paralysis of Harvard Medical School. Dr. Coon will take charge of the department July 15. Until that time Dr. Pearse will continue to act as health commissioner. The health department of Kansas City has been in somewhat of a disorganized condition since the death of Dr. Paquin, and recently radical changes in the management of the General Hospital and other departments of the health service had been contemplated. Since Dr. Coon has expressed his willingness to accept the position of Director of Public Health it has been decided that any contemplated change in the management of the health institutions of the city shall be held in abeyance until the new director assumes charge.

OUR esteemed friend and fellow-citizen, Dr. J. W. Hawkins, showed us an invitation to be present at a reunion of the surviving members of his class, that graduated in 1861, at the Jefferson Medical College, of Philadelphia. Fifty-six years in his professional harness, winter and summer, night and day—seeing more of suffering and sorrow than of gladness—is a long time for one to serve his fellow-man, and no matter what his financial reward may have been during these long years, it has been a minimum wage when compared to his services.

We do not know how numerous this class was at the time of its graduation—certainly it is few enough now—but we think we can safely say that there have been few of them who have been more faithful to the trust that their Alma Mater placed in their hands that day, fifty-six years ago. Dr. Hawkins will be 80 years old on his next birthday, and, but for a recent illness, he would be as active and virile as many men much younger. Dr. Hawkins has led the trying life of a country practitioner of medicine, but his hard lines of service have been more than compensated for by his happy home surroundings—his wife, who has been his constant and helpful companion along the rough, as well as pleasant highways of life, has been his ever present inspiration, worthy of every effort. God bless them both! We wish it were in our power to give them just as many years of earthly existence, with health and strength, as they might wish for.—Glasgow (Mo.) *Mis-sourian*.

## MEMBERSHIP CHANGES, JUNE, 1917

### NEW MEMBERS

Zachary T. Arnold, Amith.  
John Aull, Kansas City.  
John G. Birchett, Cardwell.  
Irving H. Boemer, St. Louis.  
McDowell Botts, Mexico.  
Wallace S. Burney, Miller.  
Thos. B. Butler, St. Louis.  
Ersel M. Fessenden, Springfield.  
Walter W. Harrington, Kansas City.  
Hardy D. Havard, Sedalia.  
J. Frank Jolley, Mexico.  
J. F. Kimberlin, Clarksdale.  
Wm. Henry Littler, Clarksdale.  
Chas. R. Long, Sedalia.  
Irvin Phillips, Buffalo.  
George F. Rendleman, St. Louis.  
Wm. G. Rowe, Blue Springs.  
Wm. F. Simon, St. Louis.  
Wm. Thos. Sillyman, Bucyrus.  
Leslie L. Smith, Urich.  
Guy H. Wilson, St. Louis.



## CHANGE OF ADDRESSES

Arthur G. Beall, Mill Grove to Hutchison, Kan.

L. F. Biesemeyer, Westphalia to Chamois.

R. B. Brewster, 816 Lathrop Bldg. to 520 Chambers Bldg., Kansas City.

Alonzo L. Carpenter, 417 W. 6th St. to 614½ Main St., Joplin.

E. F. Cook, St. Joseph to Ft. Riley, Kan.

Chas. H. Eyermann, St. Louis to Sullivan.

Edwin H. Eyermann, 3136 S. Grand Ave. to 2924 S. Grand Ave., St. Louis.

J. B. Keber, Denver, Colo., to Santa Fe, New Mexico.

W. U. Kennedy, 1121 Cass Ave. to 800 Carleton Bldg., St. Louis.

Roy O. Lieuallen, St. Joseph to Princeton.

H. A. Lowe, Springfield to Fort Logan, H. Roots, Ark.

A. P. Muensch, 1259 N. Kingshighway to 5115 Page Blvd., St. Louis.

S. A. Newman, Cassville to Mt. Vernon.

George P. Pipkin, 4027 Prospect Ave. to 5520 Wayne Ave., Kansas City.

Lawrence T. Post, St. Louis to Crawford, N. J.

A. W. Proetz, 5899 Delmar Ave. to 5415 Bartmer Ave., St. Louis.

Harry T. Randle, 6510 Delmar to 253 Field Bldg., University City.

J. T. Redwine, Kennett to Davis, W. Va.

S. D. Reynolds, St. Joseph to Gower.

Chas. Shattinger, 2024 S. Grand Ave. to 2738 Utah Pl., St. Louis.

W. E. Steele, 1431 Charlotte, Kansas City to Clinton, Mo.

Albert S. Steiner, 6116 Waterman Ave. to 5 Arundel Pl., St. Louis.

Wm. A. Swearingen, Hayti to Caruthersville.

J. H. Tinsley, Bois d'Arc to Iconium.

Sam'l C. Vaughn, New Franklin to Hurricane.

H. L. Walker, Logan Block to 916 N. Third St., St. Joseph.

James Rex Williams, Kansas City to Siloam Springs, Ark.

Chas. Wyche, Humboldt Bldg. to 1207-09 Chemical Bldg., St. Louis.

## REINSTATED

Wm. H. Hays, Hannibal.

Lewis Hunker, St. Louis.

## DECEASED

Rollin H. Barnes, St. Louis.

B. R. Downing, Farmington.

D. C. Gore, Marshall.

Cornelius O'Connor, Kansas City.

Fred'k L. Pohlmann, St. Louis.

F. W. Rathbone, Kansas City.

L. A. Todd, St. Joseph.

## SOCIETY PROCEEDINGS

## COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.  
Webster County Medical Society, Dec. 6, 1916.  
Platte County Medical Society, Dec. 8, 1916.  
Cape Girardeau County Medical Society, Dec. 15, 1916.

Livingston County Medical Society, Dec. 16, 1916.  
Madison County Medical Society, Dec. 17, 1916.  
Carter-Shannon County Medical Society, Dec. 20, 1916.

Atchison County Medical Society, Dec. 26, 1916.  
Linn County Medical Society, Dec. 30, 1916.  
Clark County Medical Society, Dec. 30, 1916.  
Benton County Medical Society, Dec. 30, 1916.  
Chariton County Medical Society, Jan. 1, 1917.  
Schuyler County Medical Society, Jan. 5, 1917.  
Crawford County Medical Society, Jan. 9, 1917.  
Adair County Medical Society, Jan. 10, 1917.  
Dent County Medical Society, Jan. 10, 1917.  
Mississippi County Medical Society, Jan. 16, 1917.  
Camden County Medical Society, Jan. 23, 1917.  
Barton County Medical Society, Jan. 30, 1917.  
Scott County Medical Society, Feb. 13, 1917.  
Cooper County Medical Society, Feb. 21, 1917.  
Gentry County Medical Society, Feb. 28, 1917.  
Marion County Medical Society, March 1, 1917.  
Ralls County Medical Society, March 13, 1917.  
Perry County Medical Society, March 20, 1917.  
Ste. Genevieve County Medical Society, March 27, 1917.

Reynolds County Medical Society, March 30, 1917.  
Polk County Medical Society, April 7, 1917.  
Pike County Medical Society, April 11, 1917.  
Howell County Medical Society, April 17, 1917.  
Cass County Medical Society, April 18, 1917.  
Sullivan County Medical Society, April 20, 1917.  
Ray County Medical Society, April 25, 1917.  
Taney County Medical Society, May 1, 1917.  
Vernon County Medical Society, May 10, 1917.  
Dade County Medical Society, May 12, 1917.  
Holt County Medical Society, May 14, 1917.  
Carroll County Medical Society, May 23, 1917.  
Pemiscot County Medical Society, June 6, 1917.  
Laclede County Medical Society, June 13, 1917.

## Missouri State Medical Association

Sixtieth Annual Meeting, held at  
Springfield, May 14, 15, 16, 1917

## MINUTES OF THE HOUSE OF DELEGATES

## Colonial Hotel

## Monday, May 14, 1917—Morning Session

The House of Delegates was called to order by the President, Dr. J. Franklin Welch, Salisbury, at 9:35 a. m.

At the roll call sixty-six members answered present, as follows:

County	Delegate
Audrain.....	J. G. Moore, Mexico
Barton.....	J. L. McComb, Lamar
Boone.....	A. W. McAlester, Columbia
Buchanan.....	Daniel Morton, St. Joseph
Caldwell.....	George S. Dowell, Braymer

<i>County</i>	<i>Delegate</i>
Cape Girardeau.....	G. W. Vinyard, Jackson
Carroll.....	E. E. Brunner, Carrollton
Carter-Shannon.....	J. A. Chilton, Van Buren
Cass.....	H. S. Crawford, Harrisonville
Chariton.....	G. W. Hawkins, Salisbury
Christian.....	J. A. Robertson, Ozark
Clay.....	J. J. Gaines, Excelsior Springs
Daviess.....	W. L. Brosius, Gallatin
Dent.....	W. E. Rudd, Salem
Franklin.....	H. A. May, Washington
Gasconade-Maries-Osage.....	J. D. Seba, Bland
Greene.....	S. A. Johnson, Springfield
Greene.....	A. L. Anderson, Springfield
Grundy.....	O. R. Rooks, Trenton
Howard.....	W. B. Kitchen, Glasgow
Howell.....	H. C. Shuttee, West Plains
Jackson.....	William Frick, Kansas City
Jackson.....	J. D. Griffith, Kansas City
Jackson.....	Franklin E. Murphy, Kansas City
Jackson.....	W. J. Frick, Kansas City
Jackson.....	N. P. Wood, Independence
Jackson.....	Fred B. Kyger, Kansas City
Jackson.....	Jabez N. Jackson, Kansas City
Jasper.....	B. R. McAllaster, Carthage
Jefferson.....	F. S. Lucky, Festus
Johnson.....	L. J. Schofield, Warrensburg
Laclede.....	J. W. Lindsay, Orla
Lafayette.....	C. T. Ryland, Lexington
Lawrence-Stone.....	W. S. Loveland, Verona
Linn.....	U. G. Buck, Rothville
Livingston.....	Reuben Barney, Chillicothe
Mississippi.....	A. W. Chapman, Charleston
Moniteau.....	J. B. Norman, Tipton
Newton.....	H. L. Porter, Seneca
Nodaway.....	L. E. Dean, Maryville
Perry.....	F. M. Vessells, Perryville
Pettis.....	Guy Titsworth, Sedalia
Phelps.....	S. L. Baysinger, Rolla
Platte.....	Spence Redman, Platte City
Polk.....	C. H. Brown, Fairplay
Pulaski.....	E. A. Oliver, Richland
Putnam.....	Ida May Nulton, Livonia
Randolph.....	C. B. Clapp, Moberly
St. Louis City.....	Wenzel C. Gayler, St. Louis
St. Louis City.....	W. H. Mook, St. Louis
St. Louis City.....	William E. Holdenried, St. Louis
St. Louis City.....	R. S. Vitt, St. Louis
St. Louis City.....	W. H. Stauffer, St. Louis
St. Louis City.....	E. P. North, St. Louis
St. Louis City.....	R. Emmet Kane, St. Louis
St. Louis City.....	P. H. Swahlen, St. Louis
St. Louis City.....	R. L. Thompson, St. Louis
St. Louis City.....	C. E. Burford, St. Louis
St. Louis City.....	A. F. Koetter, St. Louis
St. Louis City.....	R. M. Funkhouser, St. Louis
St. Louis City.....	C. E. Hyndman, St. Louis
St. Louis City.....	A. H. Hamel, St. Louis
St. Louis.....	Horne Miles, Webster Groves
Taney.....	G. B. Mitchell, Branson
Texas.....	Leslie Randall, Licking
Vernon.....	T. B. M. Craig, Nevada

Dr. Franklin E. Murphy of Kansas City, in a few well-chosen words, expressed the keen loss felt by the Jackson County Medical Society in the recent death of one of their delegates, Dr. O. L. Castle, and at the conclusion of his remarks the House stood in respect to the memory of Dr. Castle and his splendid work for the good of organized medicine.

The Secretary read the minutes of the meeting at Excelsior Springs, May, 1916, and on motion the minutes were approved as read.

The President's message and recommendations were read by Dr. J. Franklin Welch, as follows:

*To the House of Delegates, Missouri State Medical Association:*

Another year has been added to the great calendar of time since I assumed the duties and responsibilities of the Presidency of this Association. I have devoted much of my time and energy to its affairs with supreme delight and pleasure, for it has been a labor of love, I assure you. I indulge in the hope that the efforts and accomplishments of the year have the indelible impress of approval of the Association.

I have at all times and under all circumstances endeavored to create a renewed and unquenchable desire for greater progress in higher medical education in our noble profession. I feel encouraged and doubly assured that our efforts are ripening into a golden fruitage that will ere long rank our much beloved Association among the first in the great galaxy of states of our Union.

I gladly take this opportunity of thanking the officers, committeemen and House of Delegates for their personal and official consideration without which I could have accomplished but little. You promised at the beginning of my administration that you would help, aid and assist; I have found you on the square and loyal.

I have visited quite a goodly number of the component medical societies of the state and have, without a single exception, found them in splendid condition, vigorous and full of enthusiasm. I have also made frequent visits to the headquarters of our Secretary and Editor, and have at all times found him with his able corps of assistants, Misses Osburn and Patton, busy in the interests of the Association and striving to constantly improve our state journal, which I think all will agree has grown greatly in favor as the years come and go.

We hail with delight the fact that our financial condition as an organization continues prosperous as evidenced by the report of our Treasurer. All will remember with deepest regret the loss of our distinguished friend and fellow, Dr. W. S. Aleo, our Treasurer. In the appointment of Dr. Gail D. Allee to succeed his father, no mistake was made, for he has made a very able, proficient officer.

I wish to direct especial attention to the untiring energy of the Council on Health and Public Instruction, of which Dr. Robert M. Funkhouser is chairman. They deserve honorable mention, for their labors were very creditably and zealously performed. We through their efforts succeeded in defeating much vicious and dangerous legislation.

The bill in which we were all mostly interested, known as the Gardner Bill, creating a State Board of Control for Eleemosynary Institutions, was, after a stormy voyage meeting with much opposition, finally defeated, much to the regret of the committee. Also House Bill No. 516, creating a Division of Child Hygiene of the State Board of Health, and the Workmen's Compensation Bill were lost.

Let us not become discouraged by these defeats, but let us with renewed energy unfurl the Banner of Right, planting it on the Mountain of Success and keep up the fight until victory is ours.

The Committee on Scientific Work, of which Dr. E. J. Goodwin is chairman, deserves its quota of praise—our splendid programs bespeak what their labors have been.

The Committee on Defense still maintains their splendid record. Praise for them is always in order, and with Dr. R. E. Schlueter as chairman, we need have no fear but that justice will be meted out to all offenders of the right.

The other committees, of which I will not make special mention, all deserve praise for their splendid work.



*Postgraduate Study:* The Executive Committee has considered a plan to invite the State University to send members of the medical staff of the University to various points in the state to give postgraduate instruction to the members of county societies. The plan contemplates asking other medical colleges to do likewise. This is a phase of school extension work which ought to prove exceedingly valuable for the practitioner in districts removed from large centers of population. Such postgraduate work has been undertaken in several states and is most successfully operated when conducted under the auspices of the State Medical Association. In some states the State Board of Health has cooperated with the Association by establishing clinics, especially for suspected tuberculosis. The lecturers sent out by the Secretary did not receive any fee for their services, but the members of the county societies attending the lectures paid the railroad fare and expenses. This, I think, deserves your serious consideration.

*Election of President:* The manner of electing the President of the Association seems to be unsatisfactory to some members, as is evidenced by the amendment to the Constitution to be voted on at this session requiring that the President be elected in the general session so that all members attending the meeting may vote. In considering this matter it is essential that you do not forget the importance of the scientific work of the meeting. We have time to read and discuss only about thirty-six papers at our annual sessions, so I would direct your attention to the fact that if the election of the President were placed in the general session the number of papers to be read will probably be reduced.

*Election of President-Elect:* The method adopted by some state societies and by the American Medical Association to elect a President-Elect has given satisfaction. The President-Elect would have time to familiarize himself with the work of the Association before actually assuming his office, and perhaps more thought and consideration can be given to the choice of this important officer under such circumstances. I would suggest that the subject be considered by us with view of adopting this method.

*Fees for Insurance Examination:* The amount of fees allowed by insurance companies for examination of applicants is not satisfactory in some instances, and has been discussed in several county societies with the view of establishing a minimum fee of \$5. Members feel that the Association should speak on this subject so that the attitude of the majority of the members may be made known. I am informed that Texas and Kentucky have adopted a provision of this nature, and that all insurance companies pay a minimum fee of \$5.

*Permanent Place of Meeting:* The completion of our state capitol brings up for consideration the proposition to have our meetings at Jefferson City annually, or at least on alternate years when the legislature is not in session. The excellence of the capitol for a meeting place cannot be surpassed anywhere in the state, and the hotel accommodations in Jefferson City are now superior to what they formerly were.

*Permanent Endowment Fund:* The Pennsylvania State Medical Association has recently decided to establish a permanent fund. The association will place \$1,200 annually in this fund and try to induce donations and bequests to it from liberal minded citizens. There is no doubt that our Association could accomplish far more than it is now doing in behalf of the individual practitioner, the profession as a body and the welfare of the state if we possessed a large endowment fund. I suggest that this is a subject that might be considered by the House of Delegates with much profit to the organization.

On motion, the President's message and recommendations were referred to the Judicial Council.

The President appointed the following Committee on Nominations: Dr. J. G. Moore, Mexico, chairman; Dr. A. L. Anderson, Springfield; Dr. H. C. Shuttee, West Plains; Dr. Franklin E. Murphy, Kansas City; Dr. Guy B. Mitchell, Branson; Dr. C. B. Clapp, Moberly; Dr. C. T. Ryland, Lexington; Dr. S. L. Baysinger, Rolla; Dr. C. E. Burford, St. Louis, and Dr. W. L. Brosius, Gallatin.

Dr. S. A. Johnson, Springfield, reported for the local Committee on Arrangements.

Dr. J. D. Griffith moved the report be adopted. Seconded and carried.

Dr. A. R. McComas read the report of the Judicial Council as follows:

### REPORT OF THE JUDICIAL COUNCIL

The Executive Committee of the Judicial Council submits the following report of its doings:

Only three meetings of this committee have been held during the year.

The component societies as a whole have been doing good work, only one having failed to remit dues for its members up to date.

The death of our Treasurer, W. S. Allee, was a great loss to the organization. Not only as Treasurer, but in every other position which he was called on to fill he brought that earnest fidelity and sound judgment which characterized his whole life. Dr. Gail Allee was appointed to fill the vacancy, and the business of this office has moved on without interruption.

The Children's Code Commission requested the Association to aid them in drafting bills affecting child welfare in this state. This assistance was given by Dr. Funkhouser, chairman of the Committee on Health and Public Instruction, who was also appointed as our representative on the commission which drafted the Workmen's Compensation Bill.

The Executive Committee, in order to extend postgraduate work, has requested the State University to assign lecturers to the county societies. This plan can be carried out to great advantage to the physicians of this state if an appropriation of money is made for the purpose. It has been necessary many times during the year to consult our attorney, Mr. Morton Jourdan, who in each instance has given his advice freely. We believe this Association should express its appreciation of this service.

The Defense Committee has had many conflicts and annoying cases to consider which they have managed very successfully and economically.

The cost of THE JOURNAL has of necessity increased materially, but the income has also increased. Our general running expenses have increased, but they are kept as low as is consistent with efficient service. The work of the Secretary and his assistants is large and very exacting, but carefully and economically managed.

The finances of the Association are in good condition, and we would recommend that another \$1,000 be added to the sinking fund on the same conditions as last year.

Dr. J. D. Griffith moved the report be adopted. Seconded and carried.

Dr. E. J. Goodwin read the annual report of the Secretary-Editor. (See page 312.)

Dr. Griffith moved the report be received. Seconded and carried.

Dr. G. D. Allee of Lamar read the annual report of the Treasurer. (See page 312.)

Dr. Griffith moved the report be referred to the Judicial Council. Seconded and carried.

Dr. W. C. Gayler of St. Louis read the report of the Committee on Scientific Work. (See page 313.)

Dr. Griffith moved the report be accepted. Seconded and carried.

Dr. R. M. Funkhouser of St. Louis read the report of the Council on Health and Public Instruction, at the conclusion of which he moved that the House of Delegates stand for one moment in respect to the memory of Dr. William S. Allee and Dr. J. S. Wallace and their valuable aid rendered this committee during the past. Seconded and carried. (See page 313.)

Dr. R. Emmet Kane of St. Louis moved a rising vote of thanks be extended the Council on Health and Public Instruction for their valuable services rendered the medical profession during the Fifty-Ninth General Assembly at Jefferson City. Seconded and carried.

Dr. Robert E. Schlueter of St. Louis read the report of the Committee on Defense. (See page 314.)

Dr. Griffith moved a vote of thanks be extended to this committee for their very efficient work, and that their report be received and referred to the Judicial Council. Seconded and carried.

Dr. N. P. Wood read the report of the Committee on Revision of Constitution and By-Laws. (See page 315.)

Dr. Kane moved the report of the committee be received and the consideration of the proposed changes in the By-Laws be made a special order of business to follow the election of President. Seconded by Dr. Hamel. Discussion by Drs. Baysinger, Shuttee, Clapp and Hamel. Carried.

Dr. B. R. McAllaster of Carthage read the report of the Committee on Necrology. (See page 318.)

Dr. J. N. Jackson moved the report be received and referred to the Publication Committee for publication in THE JOURNAL. Seconded and carried.

Prof. E. N. Meador, Jefferson City, addressed the Association on the needs of a new constitution for the state of Missouri.

Dr. J. N. Jackson addressed the Association on the medical man and the war situation and moved that the question be referred to the Judicial Council with instructions to recommend some specific plan which could be applied to Missouri to meet this problem. Discussion by Drs. Funkhouser, McAlester, Jackson, Griffith and McComas. Seconded and carried.

Prof. William P. Evans of St. Louis further discussed the question of a new constitution for the state.

On motion the meeting adjourned to meet at 3:00 p. m.

#### Afternoon Session

The House of Delegates was called to order by the President at 3 o'clock.

The roll was called by the Secretary and a quorum found present.

The Judicial Council reported on the motion referred to that body to draft plans for taking care of the practice of members who go to the front.

Dr. R. M. Funkhouser of St. Louis moved that the delegates to the next meeting of the A. M. A. be instructed to take up the question of transfer of members from one unit society of one state to a unit society of another, as there are cases where members of one state, delinquent or not, go to another state without a transfer card and illegally become members of a unit society in another state. This subject should be brought to the attention of the proper authorities at the coming meeting of the A. M. A. and properly settled. No member of a unit society should be permitted to join or should be accepted in a unit society of another state unless the said member desiring membership in another state shall conform to the laws which demand all dues be paid and a proper transfer be obtained from the unit society from which transfer is desired. Seconded by Dr. Hamel. Discussion

followed by Drs. Griffith, Funkhouser and Rudd. Carried.

Dr. R. Emmet Kane presented the following resolution:

WHEREAS, The Congress of the United States has declared a state of war to exist between the United States of America and the imperial German government; be it

*Resolved*, That any member of the Missouri State Medical Association who shall give aid or assistance to any government which is at the present time or which shall at any future time be engaged in waging war against the United States, shall be considered an alien enemy and shall ipso facto forfeit his membership in the Missouri State Medical Association.

R. EMMET KANE,  
R. L. THOMPSON,  
C. E. HYNDMAN.

Dr. Kane moved the adoption of the resolution. Seconded and carried.

Dr. Guy B. Mitchell of Branson introduced the following resolution and moved its adoption:

WHEREAS, The public health, the educational, social and industrial welfare of Missouri is being retarded by her antiquated constitution; therefore be it

*Resolved*, That we endorse the movement for a new state constitution and hereby pledge our earnest support and our cooperation in this important work, and authorize the President of this Association to appoint a committee of five to represent the Missouri State Medical Association on the Executive Committee of the New Constitution Association. Seconded and carried.

Dr. W. H. Mook of St. Louis introduced the following resolutions and moved their adoption:

WHEREAS, Salvarsan is a drug which is of vital importance to the protection of health and to the saving of life; and

WHEREAS, The patent rights conferred on salvarsan and its congeners have created a monopoly which has permitted a price to be placed on the drug which makes it unavailable to tens of thousands of indigent sick in this country; and

WHEREAS, The drug has hitherto been supplied to this country from foreign shores and the supply during the war has been uncertain and insufficient; and

WHEREAS, The patents have prevented the preparation and distribution of the drug in this country by American laboratories; and

WHEREAS, The patents conferred are operating against the health interests and the public welfare of this country; therefore be it

*Resolved*, By the Missouri State Medical Association that Congress be earnestly urged to abolish the patents on salvarsan and its closely related products; and be it further

*Resolved*, That a copy of these resolutions be forwarded to Senator Ollie James, chairman of the Senate Committee on Patents, and Representative Charles B. Smith, chairman Patent Committee of the House.

W. H. MOOK,  
W. C. GAYLER,  
R. EMMET KANE.

Dr. F. M. Vessells of Perryville moved to amend the resolution to include Senators Stone and Read and all congressmen from Missouri. Seconded.

Dr. A. W. McAlester, Jr., Kansas City, moved to amend the resolution further to cover all patented drugs in this country or that may be in this country. Seconded and carried as amended.

Dr. Welch read the resignation of Dr. T. W. Cotton of Van Buren as councilor of the Twenty-Fourth District.



Dr. Griffith moved that the resignation be accepted with the thanks of the Association for the work of Dr. Cotton as councilor of his district, and that the vacancy be filled by the Nominating Committee. Seconded and carried.

Dr. J. N. Jackson introduced the following resolution and moved its adoption:

*Be it resolved by the Missouri State Medical Association in convention assembled:*

First. That the physicians of Missouri hereby pledge their loyalty to our government in the existing war.

Second. That those who may be required in actual service should volunteer their services.

Third. That those who remain at home should volunteer to care for the practice of those called to service and to turn over to them or their dependents a liberal portion of the income of this work.

Fourth. That a committee of five be named by the President of the Missouri State Medical Association to formulate definite plans for rendering this resolution effective.

Fifth. That all other physicians not members of this Association be invited to join this plan of loyal professional service.

Sixth. That a copy of these resolutions be furnished the press for the information of all members of the medical profession, and that as soon as possible these plans be submitted to each component county society for approval.

Seconded. Discussion followed by Drs. Clapp, Seba, Insley, Shuttee, Kane, Crawford and McAllaster. Carried.

Dr. C. R. Woodson, St. Joseph, chairman of the special committee appointed by the House of Delegates at Excelsior Springs, 1916, to draft a law whereby the state eleemosynary institutions would be taken out of political control, submitted a very concise and complete report of the activities of the committee and moved that if the actions of this committee were approved by the House of Delegates, that a committee be appointed to take this matter before the Sixtieth General Assembly and to improve if possible on this law.

Dr. Griffith moved an amendment to Dr. Woodson's motion by continuing the same committee.

Dr. Woodson asked the chair to add to this committee the name of Dr. M. A. Bliss of St. Louis. Seconded and carried.

The subject of why the bill prepared by the special committee, of which Dr. Woodson was chairman, failed to pass, was discussed at length by Drs. Griffith and Mitchell.

Dr. Goodwin read a copy of a telegram signed by the secretary and president of the Colorado State Medical Society concerning the feasibility of enlisting the services of the office of the Secretary of the A. M. A. in cooperation with the standing committee of the A. M. A. on Red Cross Work, in compiling all necessary personal information relating to the physicians of the United States for the army authorities.

Dr. Goodwin read a communication addressed to Dr. J. Franklin Welch from Mrs. Frances C. Axtell, vice chairman of the United States Employees' Compensation Commission, and his reply to same.

The President appointed the following committee of five, as recommended by Dr. Jackson's resolution: Drs. W. J. Frick, Kansas City, chairman; R. M. Funkhouser, St. Louis; G. W. Hawkins, Salisbury; T. W. Cotton, Van Buren, and S. A. Johnson, Springfield.

Dr. J. G. Moore, chairman of the Nominating Committee, reported as follows:

Vice presidents: first, Dr. J. P. Henderson, Kansas City; second, Dr. H. A. Lowe, Springfield; third, Dr.

F. B. Long, Sedalia; fourth, Dr. W. A. Clark, Jefferson City; fifth, Dr. T. W. Cotton, Van Buren.

Delegates to A. M. A.: Dr. E. J. Goodwin, St. Louis; Dr. R. M. Funkhouser, St. Louis.

Councilors: Eighth District, Dr. L. W. Cape, Maplewood; Tenth District, Dr. D. A. Barnhart, Huntsville; Thirteenth District, Dr. Franklin E. Murphy, Kansas City; Twentieth District, Dr. A. H. Hamel, St. Louis; Twenty-Third District, Dr. J. H. Timberman, Marston; Twenty-Fourth District, Dr. William Spaulding, Poplar Bluff; Twenty-Fifth District, Dr. O. A. Smith, Farmington.

Committee on Defense: Dr. R. Emmet Kane, St. Louis, chairman; Dr. Robert E. Schlueter, St. Louis; Dr. Charles E. Hyndman, St. Louis.

Council on Health and Public Instruction: Dr. A. W. McAlester, Jr., Kansas City.

Committee on Vaccination: Dr. William Frick, Kansas City.

Committee on Cancer: Dr. N. B. Carson, St. Louis; Dr. W. L. Brosius, Gallatin; Dr. Frank J. Hall, Kansas City.

Dr. J. D. Griffith moved the acceptance of the report of the Nominating Committee. Seconded and carried.

Dr. Franklin E. Murphy nominated Dr. Robert E. Schlueter of St. Louis for President.

Dr. R. M. Funkhouser seconded the nomination.

Dr. N. P. Wood of Independence moved that the rules of the House be suspended and that the nominations be closed and the Secretary be instructed to cast a unanimous ballot for Dr. Schlueter for President for the ensuing year. Seconded and carried.

Dr. Goodwin cast the ballot for Dr. Schlueter for President.

Dr. Schlueter was called on for an expression, to which he responded and expressed his appreciation for the high honor bestowed on him in being chosen the head of the profession in Missouri for the coming year.

The Secretary read the report of the Committee on Revision of Constitution and By-Laws.

Dr. J. B. Norman moved the adoption of the amendment to the Constitution by which the President in future would be elected in general session.

Discussion followed by Drs. Kane, Norman, Murphy, Funkhouser, Jackson, Morton, McAlester, Baysinger and Hamel.

The vote was taken by roll call with the result as follows: 32 ayes, 30 noes.

The chair announced that since it requires a two-thirds vote to change the constitution, the amendment was lost.

Dr. H. S. Crawford moved the adoption of the amendment concerning meetings of the Council. Seconded and carried.

Dr. C. B. Clapp introduced the following amendment to the Constitution: Strike out the words "who is not in attendance at that Annual Session and" occurring in the fifth and sixth lines of Article VIII, Sec. 3, so that the section shall read: "Sec. 3. The President, Vice Presidents and Councilors shall be elected by the House of Delegates; but no delegate shall be eligible to any office named in the preceding section except that of Councilor, and no person shall be elected to any office who has not been a member of the Association for the previous two years."

The chair announced that Dr. Clapp's proposed amendment must lay over for a year.

Dr. Hamel read a telegram from Dr. J. A. Seabold, secretary of the St. Louis Medical Society, requesting that the delegates to the American Medical Association be instructed to use their good efforts to bring the meeting of the American Medical Association of 1918 to St. Louis, and introduced a motion to that effect. Seconded and carried.

Dr. S. V. Bedford of Jefferson City nominated Jefferson City for the next place of meeting of the Association.

Dr. Franklin E. Murphy moved that the nominations for place of meeting be closed. Seconded and carried.

Dr. J. B. Norman moved that the next meeting of the Association be held in Jefferson City. Seconded and unanimously carried.

Dr. R. Emmet Kane of St. Louis moved that a vote of thanks of the House of Delegates be expressed to the President and the officers who have served with him. Seconded and carried.

On motion the meeting adjourned *sine die*.

## MINUTES OF THE JUDICIAL COUNCIL

Physicians' Club Rooms—Monday, May 14, 1917

The Judicial Council was called to order at 1:15 p. m. by the chairman, Dr. A. R. McComas, Sturgeon.

The Secretary called the roll to which sixteen members responded as follows:

1st District.....	E. L. Crowson, Pickering
8th District.....	L. W. Cape, Maplewood
9th District.....	A. R. McComas, Sturgeon
11th District.....	G. W. Hawkins, Salisbury
12th District.....	Spence Redman, Platte City
13th District.....	Franklin E. Murphy, Kansas City
14th District.....	C. T. Ryland, Lexington
15th District.....	H. S. Crawford, Harrisonville
17th District.....	W. J. Ferguson, Sedalia
18th District.....	Frank De Vilbiss, Tipton
19th District.....	S. V. Bedford, Jefferson City
20th District.....	A. H. Hamel, St. Louis
23rd District.....	J. H. Timberman, Marston
24th District.....	T. W. Cotton, Van Buren
28th District.....	T. O. Klingner, Springfield
29th District.....	R. L. Wills, Neosho

The minutes of the last annual meeting, Excelsior Springs, May 8, 1916, were read by the Secretary and approved.

The chair announced that according to agreement the motion of Dr. Jabez N. Jackson, recommending some specific plan be adopted for caring for the dependents of doctors called to the front, referred to the Council by the House of Delegates, be first considered.

The Chair called for a discussion of the subject, to which responded the following doctors: J. N. Jackson, W. J. Frick, J. D. Griffith, Daniel Morton, C. R. Woodson, L. W. Cape, A. B. Clark, A. H. Hamel, E. L. Crowson, T. W. Cotton, W. R. Hawkins and Frank De Vilbiss.

On motion by Dr. Hamel, seconded and carried, the following committee was appointed to draft resolutions to present to the House of Delegates for final action: Drs. Jackson, Griffith, Frick, and Councilors Cotton and Hawkins.

The report of the Defense Committee which was referred to the Council by the House of Delegates, was on motion received.

The report of the Treasurer was referred to the Auditing Committee.

The report of the Secretary was ordered received and referred to the Auditing Committee.

The chair appointed the following committee to audit the books of the Secretary and Treasurer of the Association and to report their findings to the Council: Drs. W. J. Ferguson, S. V. Bedford and C. T. Ryland.

The Secretary read a letter from the American Medical Association concerning the advisability of employing field men to look after subscriptions and fellowship matters in the state of Missouri. After a discussion by Drs. Murphy, Crawford, Wills and Ryland, Dr. Hamel moved that the communication be filed. Seconded and carried.

Dr. A. H. Hamel discussed the justice of compensation or remuneration to the Council on Health and Public Instruction for their expenses incurred in Jefferson City at the Forty-Ninth General Assembly, while looking after the affairs of the medical profession. Dr. Crawford indorsed Dr. Hamel's recommendation.

Dr. Jackson read the following resolution drafted by the special committee, to be presented to the House of Delegates for final action:

*Be It Resolved by the Missouri State Medical Association in Convention Assembled:*

First. That the physicians of Missouri hereby pledge their loyalty to our government in the existing war.

Second. That those who may be required in actual service should volunteer their services.

Third. That those who remain at home should volunteer to care for the practice of those called to service and to turn over to them or their dependents a liberal portion of the income of this work.

Fourth. That a committee of five be named by the President of the Missouri State Medical Association to formulate plans for rendering this resolution effective.

Fifth. That all other physicians not members of this Association be invited to join this plan of loyal professional service.

Sixth. That a copy of these resolutions be furnished the press for the information of all members of the medical profession and that as soon as possible these plans be submitted to each component county society for approval.

On motion the resolution was approved.

Dr. Timberman commended the activities of the Council and the Defense Committee for their activity in defending members sued for malpractice and gave an instance where such work had been influential in bringing eligible doctors into the organization.

Dr. Ferguson moved that an expression of sympathy from the Council be extended to Drs. Gebhart, Wright and Bridges, Councilors who were detained at home on account of illness in their own families. Seconded and carried.

Dr. Ferguson moved that the Council order the necessary expenses of the Council on Health and Public Instruction be paid as suggested by Dr. Hamel. Seconded and carried.

Dr. Ferguson moved to adjourn to 11:30 a. m., Tuesday, May 14. Seconded and carried.

## Meeting of May 15, 1917

The Judicial Council was called to order on Tuesday, May 15, at 11:35 a. m., by the chairman, Dr. A. R. McComas.

The minutes of the meeting of May 14 were read by the Secretary and approved.

Dr. W. J. Ferguson reported for the Auditing Committee as follows:

We, your Auditing Committee, beg to report that we have this day audited the books and accounts of the Secretary and Treasurer and find same to be correct.

W. J. FERGUSON,  
S. V. BEDFORD,  
C. T. RYLAND.



Dr. L. W. Cape moved that the report be adopted and the committee be discharged. Seconded and carried.

The Secretary read a communication from Dr. A. C. Crank, Councilor of the Fourth District, concerning expenses incurred during the session of the legislature.

Dr. Ferguson moved that Dr. Crank be instructed to include the item in his regular Councilor expense bill. Seconded and carried.

Dr. Hamel discussed the propriety of the Council recommending to the Treasurer of the Association that he invest such funds as are available in government war bonds, and placed a motion to that effect.

Discussion by Drs. Cape, Ryland and Crowson. The motion was seconded and carried.

There being no other business to come before the Council, the chair called for nominations for Chairman of the Council for the ensuing year.

Dr. Ferguson put in nomination the name of Dr. A. R. McComas for reelection to the chairmanship. The nomination was seconded by Dr. Cape, who moved that the nominations be closed and that the Secretary cast a unanimous ballot for the reelection of Dr. McComas. Carried.

The Secretary cast the ballot for Dr. McComas for Chairman.

Dr. Franklin E. Murphy moved that Dr. E. J. Goodwin succeed himself as Secretary of the Council. The nomination was seconded by Dr. Cape, and his motion that the nominations be closed, carried.

Dr. McComas cast the ballot for Dr. Goodwin for Secretary of the Council.

Dr. De Vilbiss moved that Dr. Gail D. Allee be reelected Treasurer of the Association. Dr. Hamel seconded the nomination and moved the nominations be closed and that the Secretary be instructed to cast a unanimous ballot for Dr. Allee. Carried.

The Secretary cast the ballot for Dr. Allee for Treasurer.

Dr. Crawford stated that he knew it was unnecessary to eulogize the Secretary and the grand place he occupies, so he wished to place the name of Dr. E. J. Goodwin in nomination to succeed himself as Secretary and Editor of the Association.

Dr. Ferguson moved that the prominent position occupied by our State Journal be not overlooked, and that the nominations for Secretary and Editor be closed. Carried.

Dr. McComas cast the ballot for Dr. Goodwin for Secretary and Editor.

Dr. Goodwin was called on to address the Council, to which he responded with words of appreciation of the untiring devotion of the members to the organization and renewed his promise to always hold the best interests of the organization above those of any individual member.

Dr. Ferguson moved that the present Executive Committee, namely Drs. McComas, Cape and Hamel be continued in office. Seconded by Dr. Murphy and carried.

At this period of the meeting Dr. McComas made some very timely remarks concerning points to be remembered when doing legislative work, and impressed on the Council their duty to assist the Defense Committee when they have business in their districts. Dr. McComas was followed by discussions of Dr. E. L. Crowson of Pickering and Dr. A. H. Hamel of St. Louis.

Dr. Ferguson moved that the Council adjourn *sine die*. Seconded and carried.

## MINUTES OF THE GENERAL SESSIONS

Landers Theather

Tuesday Morning, May 5, 1917

The General Session was called to order at 9:20 a. m., by First Vice President T. B. M. Craig of Nevada.

On motion of Dr. N. P. Wood, Independence, the address of the President was made a special order of business at 10:30 a. m.

President J. Franklin Welch took the chair.

Owing to illness Dr. Frederick R. Green, Chicago, Secretary, Council on Health and Public Instruction, A. M. A., who had been invited to read a paper on "Health Insurance and Its Influence on the Medical Profession," was unable to be present.

On motion of Dr. A. R. McComas, Surgeon, the rules were suspended and Dr. A. W. McAlester, Columbia, was given first place on the program to be followed by Dr. Frank G. Nifong, Columbia.

Dr. Daniel Morton, St. Joseph, moved that the President be empowered to appoint a committee of three to carry the greetings of the Missouri State Medical Association to the State Convention of the Grand Army of the Republic. Seconded and carried.

President Welch appointed on this committee Dr. A. W. McAlester, Columbia, chairman, Dr. C. Lester Hall, Kansas City, and Dr. C. R. Woodson, St. Joseph.

The Report of Committee on Medical Education was read by Dr. A. W. McAlester, Columbia.

Dr. Frank G. Nifong, Columbia, followed with a paper entitled "A Plea for a County General Hospital, Standardized."

The time appointed for special order of business having arrived, discussion on the papers was postponed and Dr. Welch read the Address of the President.

The papers of Drs. McAlester and Nifong were discussed by Drs. St. Elmo Sanders, Kansas City; Daniel Morton, St. Joseph; John G. Sheldon, Kansas City; A. W. McAlester, Columbia, and Frank G. Nifong, Columbia.

Dr. C. C. Conover, Kansas City, read a paper on "Intestinal Arrhythmia," illustrated by lantern slides. Discussed by Drs. William Engelbach, St. Louis, and C. C. Conover, Kansas City.

Dr. Jabez N. Jackson, Kansas City, read a paper on "Intestinal Obstruction; Review of Experimental Observations, with Practical Suggestions." Discussed by Drs. Francis Reder, St. Louis; Marsh Pitzman, St. Louis; John G. Sheldon, Kansas City; William T. Coughlin, St. Louis; Roland Hill, St. Louis; C. C. Conover, Kansas City; C. E. Hyndman, St. Louis; Jabez N. Jackson, Kansas City.

Adjourned at 12:30 p. m.

Afternoon Session, May 15, 1917

The meeting was called to order at 1:50 p. m., by President Welch.

Dr. William H. Stauffer, St. Louis, read a paper on "Infectious Diseases of Lower Bowel, with lantern slides." Discussed by Drs. St. Elmo Sanders, Kansas City, and William H. Stauffer, St. Louis.

Dr. H. S. McKay, St. Louis, read a paper on "Management of Tubo-Ovarian Infections." Discussed by Drs. Caryl Potter, St. Joseph; William H. Vogt, St. Louis; William Kerwin, St. Louis; H. S. McKay, St. Louis.

Dr. Caryl Potter, St. Joseph, read a paper on "Factors for Safety and Ultimate Results in Goiter Operations, with Report of Cases." Discussed by Drs. C. E. Hyndman, St. Louis; Francis Reder, St. Louis; Frank G. Nifong, Columbia; William Kerwin,

St. Louis; John G. Sheldon, Kansas City; William T. Coughlin, St. Louis; H. A. Lowe, Springfield; Caryl Potter, St. Joseph.

Drs. Francis M. Barnes and John R. Caulk read a paper on "Cystoscopic Examination of the Bladder in the Psychoses," with lantern slides. Discussed by Drs. Julius Frischer, Kansas City; J. P. Henderson, Kansas City; John R. Caulk, St. Louis.

Dr. Leo G. Bartels, St. Louis, read a paper on "Course and Treatment of Urethral Strictures," with lantern slides. On motion, duly seconded, Dr. Bartels was given additional time in order to show slides. The paper was discussed by Drs. J. P. Henderson, Kansas City; Julius Frischer, Kansas City; C. E. Burford, St. Louis; Clarence Martin, St. Louis; John R. Caulk, St. Louis; Leo G. Bartels, St. Louis.

Dr. C. R. Woodson, St. Joseph, reported for the Committee on Greetings to the G. A. R. Convention, as follows:

*Mr. President:*—Your committee appointed to extend greetings to the Grand Army of the Republic, now assembled in Springfield, beg to report that we were courteously and hospitably received, and they asked to have greetings from their Association extended to the Missouri State Medical Association, and to express their appreciation of the Medical Association of Missouri for its activities in regard to preparedness and its determination to furnish the army with competent physicians.

On motion of Dr. Daniel Morton, St. Joseph, the report was received.

Dr. William T. Coughlin, St. Louis, read a paper on "Preservation of Arm Function after Operations for Carcinoma of the Breast," illustrated by lantern slides. Discussed by Drs. Caryl Potter, St. Joseph; St. Elmo Sanders, Kansas City; Francis Reder, St. Louis; William Kerwin, St. Louis; William T. Coughlin, St. Louis.

Dr. A. C. Ames, Mountain Grove, read a paper on "Physiologic Therapeutics." On account of the lateness of the hour, discussion was postponed to the morning session.

Adjourned at 5:50 p. m.

#### Morning Session—Wednesday, May 16, 1917

The meeting was called to order at 9:25 a. m., by President Welch.

Dr. John Green, Jr., St. Louis, read a paper on "Dacryocystitis in Infants." Discussed by Drs. R. J. Curdy, Kansas City, and John Green, Jr., St. Louis.

Dr. E. H. Kessler, St. Louis, read a paper on "The Opaque Meal as a Diagnostic Aid in Gastro-Intestinal Complications," with lantern slides. Discussed by Drs. J. Curtis Lyter, St. Louis; O. H. McCandless, Kansas City; E. H. Kessler, St. Louis.

Dr. Frank D. Dickson, Kansas City, read a paper on "Certain Subacute and Chronic Joint Conditions." On motion of Dr. C. R. Woodson, St. Joseph, Dr. Dickson was given additional time for reading of paper. On motion of Dr. Woodson additional time was also given for showing lantern slides.

Dr. J. Archer O'Reilly, St. Louis, read a paper on "Anterior Poliomyelitis." On motion, duly seconded, additional time was given for the reading of the paper.

The president announced that a delegation from the convention of the Grand Army of the Republic wished to address the Session, and the following gentlemen spoke: Mr. W. K. Collins of Lees Summit, Mr. G. B. Cunningham of Kirksville, Mr. A. Lartman of Kansas City.

At the request of the president, Dr. C. Lester Hall of Kansas City replied to the G. A. R. delegation.

President Welch designated Dr. R. Emmet Kane, St. Louis, and Dr. G. W. Hawkins, Salisbury, to conduct the newly elected president, Dr. Robert E.

Schlueter, St. Louis, to the rostrum. Dr. Welch spoke as follows:

It affords me great pleasure, Sir, to inaugurate you as president of the Missouri State Medical Association. You have been selected by this honorable body to serve it as President and presiding officer for the ensuing year, first, because of your worth and integrity; second, because of the esteem and love in which they hold you, and third, because of your loyalty to the Missouri State Medical Association. You have been selected by this body of men who know you personally and who love you. You may be called on to preside over a larger medical organization than this in your professional career, but if you are, that honor cannot come to you as a warmer, more friendly gift, more abundant in love and esteem.

Dr. Schlueter, I now present you with this gavel, the insignia of authority. It has been in the custody of many noble men, members of this Association, who have served as President. Many of them have already passed over the river and now rest under the shade of the tree; and many others are still standing on its craggy banks, whose locks are silvered over with the frosts of many winters and whose brows are whitened with that snow which never melts. They have taken care of this, have brought it down to you spotless and pure, and we trust that you will be enabled to transmit it to your worthy successor in that same untarnished condition. It is yours, Sir, for the ensuing year; at the termination of your administration, you will transmit it to your worthy successor.

I will ask you, fellow physicians, to rise for a moment. Fellow physicians, I present you with your President. Mr. President, behold your constituents. I now extend to you the hand of congratulation on behalf of the Missouri State Medical Association and wish for you a successful, happy and prosperous administration.

PRESIDENT SCHLUETER: Gentlemen of the Missouri State Medical Association, I thank you deeply for this great honor, and will only say that I hope health and strength will be vouchsafed me and that I may develop ability enough to properly conduct your office and serve you in such fashion as you desire.

Dr. H. C. Shuttee, West Plains, made the following motion:

*Mr. President:*—I had made arrangements with Dr. Welch to make a motion at this time which I believe you will agree with me is proper.

Thirty-four years ago, when the old Kansas City, Fort Scott & Memphis Railroad was completed, I took almost the first train out to visit the physicians at Springfield. I had heard of a great many of them and I wanted to meet the profession of this city. Especially had I heard of one man who at that time was the most prominent medical man in southwest Missouri and one of the most prominent in the state of Missouri. That man was Dr. J. E. Tefft, at one time President of the Missouri State Medical Association. I believe, so far as I can recall now, that every doctor whom I met on that occasion has passed over the Great Divide.

I can remember very well indeed the impression that Dr. Tefft made on me at our first meeting. At that time I remained in Springfield two or three days and met almost all the physicians in Springfield. There were a few who were quite prominent, and among those Dr. Tefft stood out in very great prominence. My impression of him at that time was that he was the best all-round doctor I had ever met in my life, and I want to say that the most inspiring and stimulating element that has ever come into my professional career has come from my first meeting and my subsequent meetings with Dr. Tefft.



Dr. Tefft was a man whom everybody loved and respected, and I believe it is proper at this time, the first meeting here of the Association since the demise of Dr. Tefft, as a token of our esteem and respect for an ex-president of the Missouri State Medical Association, that the members present rise to their feet and stand a few moments in honor of the memory of Dr. Tefft.

Seconded and carried.

The papers of Dr. Dickson and Dr. O'Reilly were discussed by Drs. J. D. Seba, Bland; C. R. Woodson, St. Joseph; J. Archer O'Reilly, St. Louis; Frank D. Dickson, Kansas City.

Dr. W. A. Clark, Jefferson City, read a paper on "Health Conditions in the Missouri State Penitentiary."

Secretary Goodwin read a telegram of greeting from the Southern Medical Association.

Adjourned at 12:15 p. m.

#### Afternoon Session—Wednesday, May 16, 1917

The meeting was called to order at 1:55 p. m., by President Schlueter.

Dr. W. W. Duke, Kansas City, read a paper on "Dental Asepsis and Its Relation to Systemic Disease," with lantern slides. Discussed by Drs. J. Curtis Lyter, St. Louis; C. Lester Hall, Kansas City; W. W. Duke, Kansas City.

Dr. George H. Hoxie, Kansas City, read a paper on "Adult Thymus," with lantern slides. Discussed by Dr. O. H. McCandless, Kansas City, and Dr. Hoxie closing.

Dr. R. H. Meade, Kansas City, read a paper on "Carcinoma of the Larynx."

Dr. J. Curtis Lyter, St. Louis, read a paper on "Treatment of Acute Rheumatic Fever." Discussed by Dr. W. W. Duke, Kansas City; Dr. J. D. Seba, Bland; Dr. George H. Hoxie, Kansas City; Dr. J. Curtis Lyter, St. Louis.

Dr. B. G. Hamilton, Kansas City, read a paper on "Progress in Obstetrics." Discussed by Drs. C. Lester Hall, Kansas City; B. G. Hamilton, Kansas City.

Dr. Raymond M. Spivy, St. Louis, read a paper on "Control and Treatment of Criminal Abortion." Discussed by Drs. Edgar F. Schmitz, St. Louis; B. G. Hamilton, Kansas City; C. Lester Hall, Kansas City; Raymond M. Spivy, St. Louis.

Dr. J. D. Seba, Bland, read a paper on "Fallacy of Chiropractic Claims."

Dr. C. R. Woodson, St. Joseph, made the following motion:

I move you, Sir, that we extend a vote of thanks to the citizens of Springfield, and especially to the Arrangements Committee and the Greene County Medical Society, for courtesies and hospitalities extended on this occasion. Seconded and carried unanimously.

Dr. J. M. Potts, Springfield, offered the following motion:

*Mr. President:*—I move that this body go on record as favoring some movement to improve the conditions in our State Penitentiary and to investigate the facts.

Motion seconded. Dr. C. R. Woodson, St. Joseph, moved to amend as follows:

That the Missouri State Medical Association appeal as a body to its officers to notify the candidates for election to the Fiftieth General Assembly that we expect them to enact laws to correct these evils.

President Schlueter stated the amendment was in reality a substitute motion. The substitute motion was accepted by Dr. Potts and seconded and was unanimously carried.

The session adjourned, *sine die*, at 5:10 p. m.

#### MINUTES OF THE NINTH ANNUAL MEETING OF THE MISSOURI SOCIETY OF MEDICAL SECRETARIES

Springfield, May 15, 1917

The meeting was called to order at 2 o'clock p. m. by the President, Dr. O. B. Hall of Warrensburg.

The Secretary, Dr. J. Q. Cope, of Lexington, read the minutes of the last meeting which was held at Excelsior Springs, May 8, 1916. The minutes were approved as read.

The Secretary called the roll to which the following responded:

Barry County.....	W. M. West, Monett
Camden County.....	G. T. Myers, Mack's Creek
Carroll County.....	E. E. Brunner, Carrollton
Carter-Shannon County....	J. A. Chilton, Van Buren
Cass County.....	H. S. Crawford, Harrisonville
Chariton County.....	G. W. Hawkins, Salisbury
Christian County.....	J. W. Bruton, Ozark
Dent County.....	W. E. Rudd, Salem
Franklin County.....	H. A. May, Washington
Gasconade-Maries-Osage County...	J. D. Seba, Bland
Greene County.....	T. O. Klingner, Springfield
Henry County.....	F. M. Douglass, Clinton
Jefferson County.....	F. S. Luckey, Festus
Johnson County.....	O. B. Hall, Warrensburg
Laclede County.....	J. A. McComb, Lebanon
Lafayette County.....	J. Q. Cope, Lexington
Lawrence-Stone County....	R. C. Robertson, Aurora
Moniteau County.....	J. P. Burke, Jr., California
New Madrid County.....	J. H. Timberman, Marston
Perry County.....	F. M. Vessells, Perryville
Platte County.....	Spence Redman, Platte City
Polk County.....	J. F. Roberts, Bolivar
Pulaski County.....	E. A. Oliver, Richland
Putnam County.....	C. P. Vores, Unionville
Texas County.....	Leslie Randall, Licking
Webster County.....	J. R. Bruce, Marshfield
Wright County.....	J. A. Fuson, Mansfield

Other secretaries came in after the roll was called, bringing the total to about thirty-five.

The question of the length of term which delegates to the Missouri State Medical Association should serve was discussed by Drs. Douglass, May and Hall. The attention of the secretaries was called to Article V of the Constitution for County Societies as follows: "Officers. The officers of this Society shall consist of a President, Vice President, Secretary, Treasurer, Delegates and Board of three Censors. These officers, except the Delegates and Board of Censors, shall be elected annually. Delegates shall be elected for two years, and in accordance with the constitution and by-laws of the state association."

Dr. Hall recommended that the secretaries call the attention of their respective societies to this provision and at the next annual election of officers see that the county societies elect their delegates to the State Association for a term of two years. It seems that this provision has been overlooked by some societies.

The Chair announced that the State Secretary was unable to be present with the secretaries, and read a communication from Dr. Goodwin expressing his appreciation of the untiring devotion of the secretaries to his numerous calls throughout the year. The letter was ordered filed.

The Chair called for nominations for officers for the ensuing year.

Dr. T. O. Klingner nominated Dr. Spence Redman for President of the Secretaries Association.

Dr. Douglass moved the nominations close and the secretary be instructed to cast the ballot in favor of Dr. Redman for President. Carried. The secretary cast the ballot for Dr. Redman.

Dr. J. D. Seba nominated Dr. H. A. May for First Vice President.

Dr. May nominated Dr. Seba for First Vice President.

The Chair ordered the preparation of the ballot and when the votes were counted, there were nine votes for Dr. Seba and seven for Dr. May.

Dr. Seba nominated Dr. May for Second Vice President.

Dr. J. A. McComb was also nominated for Second Vice President.

The votes were taken by ballot which resulted in nine votes for Dr. McComb and seven for Dr. May. Dr. McComb was elected Second Vice President.

Dr. H. S. Crawford nominated Dr. J. Q. Cope for reelection as Secretary and Treasurer of the Secretaries Association. Dr. May seconded the nomination and moved the nominations be closed and that the Chair cast a unanimous ballot for Dr. Cope. Carried.

Dr. Hall cast the ballot for Dr. Cope for reelection as Secretary and Treasurer.

Dr. J. A. McComb moved that the Secretary of the State Association be requested to supply each secretary in the state with a copy of the Constitution and By-Laws of the Secretaries Association. Seconded and carried.

Dr. J. D. Seba of Bland addressed the Association on "Our Way of Conducting Medical Society Meetings."

Dr. J. F. Roberts of Bolivar read a paper entitled "Some of the Secretary's Duties and His Part in Securing Interest in the County Medical Society."

Dr. J. H. Timberman moved that Dr. Roberts' paper be sent to the State Journal for publication. Seconded and carried.

Discussion by Drs. McComb, Douglass, Crawford, Chilton and Timberman; Dr. Seba closing.

The Chair announced for general discussion the topic, "The Relation of the County Society to the Public," in which the following took part: Drs. Seba, Crawford, Klingner and Roberts.

The Chair announced for general discussion the topic, "Benefits of Organized Medicine."

Dr. Hall stated that this topic was intended to cover a discussion on the benefits to the medical man and to the public. Dr. Hall was followed in the discussion by Drs. Seba, Redman, Cope, Chilton and Roberts.

The Chair called for any suggestions for the good of the secretaries but no one responded. To this Dr. Hall spoke as follows:

I have listened to nearly everyone present talk this afternoon. Some talked three or four times; but in all the comments made I have not heard a single one say anything about himself that could be misconstrued as a selfish aim. You have expressed yourselves as being the most unselfish body I have met with in my life and that fact ought to be conveyed to the public. I feel very grateful to you all for your assistance in making this program a success. Dr. Cope has had quite a lot of trouble in making up the program and we certainly want to thank you all for the part you have taken in making this meeting a success.

On motion the meeting adjourned.

J. Q. COPE, Secretary. O. B. HALL, President.

## REPORT OF THE SECRETARY-EDITOR

The membership of the Association on May 1, 1916, was 3,141. During the past year there have been the following changes: 34 died; 14 resigned; 19 transferred to other states; 125 dropped for nonpayment of dues; 1 expelled; making a total of 193. There have been added 174 new members and 15 reinstated. The paid-up membership on April 20, 1917, was 2,398 and 739 delinquents, a total of 3,137. Since that time 153 additional members have paid, giving us a total paid membership to date of 2,551, and 590 delinquents; a total membership of 3,141.

### Ad Interim Appointments

The death of Dr. William S. Allee, who was elected Treasurer and Chairman of the Council on Health and Public Instruction at our last annual session, caused a vacancy in these two offices. The President appointed Dr. Robert M. Funkhouser of St. Louis Chairman of the Council on Health and Public Instruction, and added to the Council Dr. J. Frank Harrison of Mexico.

The terms of the Councilors of the following districts expire this year: 8th District, Dr. L. W. Cape, Maplewood; 10th District, Dr. D. A. Barnhart, Huntsville, appointed vice Dr. C. H. Dixon, resigned; 13th District, Dr. Franklin E. Murphy, Kansas City; 20th District, Dr. A. H. Hamel, St. Louis; 23d District, Dr. J. H. Timberman, Marston; 25th District, Dr. O. A. Smith, Farmington.

During the year I have visited fifteen county societies, the Councilor of the district usually being present and on several occasions in company with the President of the Association.

As in the past, the Secretary's office has conducted the correspondence for the Committee on Defense, Council on Health and Public Instruction, Publication Committee, Committee on Scientific Work, Executive Committee and other committees that have requested this service.

The session of the legislature as usual on such occasions, increased the amount of work in the Secretary's office but it was all accomplished by the regular force. The correspondence increases year by year and the variety of inquiries enlarges, but the files are so arranged that reference to subjects is readily obtained and the records are preserved in a methodical manner. The condition of the Association is excellent and the members generally are enthusiastic in their support of the movements undertaken by the organization.

Respectfully submitted,

E. J. GOODWIN, Secretary-Editor.

## REPORT OF THE TREASURER

As Treasurer of your Association I beg leave to submit the following report:

### GENERAL FUND

<i>Receipts</i>	
To balance received from Dr. J. F. Welch .....	\$ 6,594.92
To refund from S. W. Telephone & Telegraph Co.....	34.10
To advertising in Journal.....	3,899.54
To County Society membership fees .....	8,853.60
To interest on daily balance.....	82.08
	<hr/> \$19,464.24
<i>Disbursements</i>	
By properly executed vouchers....	\$11,590.28
By transfer to Defense Fund....	1,500.00
By transfer to Sinking Fund.....	1,500.00
	<hr/> 14,590.28
May 1, 1917, balance on hand..	\$ 4,873.96



## DEFENSE FUND

*Receipts*

To balance received from Dr. J. F. Welch .....	\$ 2,232.06
To transfer from General Fund..	1,500.00
To interest on daily balance.....	103.50
	<hr/>
	\$ 3,835.56

*Disbursements*

By order of the Defense Committee .....	\$ 368.06
	<hr/>
	368.06
May 1, 1917, balance on hand...	\$ 3,467.50

## SINKING FUND

*Receipts*

To balance received from Dr. J. F. Welch .....	\$ 1,028.91
To transfer from General Fund..	1,500.00
To interest on daily balance.....	72.12
	<hr/>
	\$ 2,601.03
Grand total of all funds on hand	\$10,942.49

Respectfully submitted,

(Signed) GAIL D. ALLEE, M.D., *Treasurer.*REPORT OF THE COMMITTEE ON  
SCIENTIFIC WORK

Your Committee on Scientific Work has prepared thirty-six papers, twelve of which were from St. Louis, ten from Kansas City and the remaining fourteen from other parts of the state.

We have attempted and have succeeded fairly well, in dividing the work among surgeons, internists, neurologists, roentgenologists, orthopedists, oculists, genito-urinary men and general practitioners.

Men who were on the 1915 or 1916 programs have been excluded, and as far as possible we solicited papers from men of our choosing, instead of waiting for volunteers. The result of this system is, that we have a high percentage of men on the program who have never attended a state meeting before.

Unfortunately, we were compelled to refuse many good men who desired to take part, and particularly was this true of St. Louis men. Some were too late, even though the program was far from complete at the time. This was due to the fact that papers on similar subjects by men engaged in the same line of work had already been arranged.

The Monday evening open meeting was prepared at the last moment, and promises to be one of the most interesting parts of our meeting.

Respectfully submitted,

E. J. GOODWIN, *Chairman,*  
J. P. HENDERSON,  
W. C. GAYLER,

*The Committee.*REPORT OF THE COUNCIL ON HEALTH  
AND PUBLIC INSTRUCTION

The Committee on Health and Public Instruction has had quite a strenuous time during the last year and it looked at one time as if its usefulness and efforts would go for naught. It would seem as if the public cared little for our unselfish work to benefit mankind and to raise the standard of medical education and the profession.

The public and the medical profession are to be congratulated rather for what was not done at the recent legislature than for what was done along medical lines.

The three bills most vigorously opposed by the Association were the Optometry Bill, the Chiropractic Bill and the Three Boards of Medical Examiners

Bill. All were defeated. The vote of the Representatives on these three bills is published in the program.

The Optometry Bill (House Bill No. 312) passed the House but was defeated in the Senate after a bitter struggle. The fact that forty-one states have adopted an optometry law influenced many members of the legislature to vote for the bill.

The Chiropractic Bill (House Bill No. 8) was defeated twice, the first time when it was refused engrossment and again when a motion to reconsider the vote for engrossment was defeated.

The Bill to Create Three Boards of Medical Examiners (House Bill No. 380) was engrossed in the House but was defeated for final passage.

A fourth bill was opposed by us, namely, a bill to license chiroprodists. It died in committee.

A bill to create a central board of control for the eleemosynary institutions (House Bill No. 646) becoming moribund, died in the Senate. During the early days of the session the prospects for its passage were very encouraging and at that time your committee thought the bill would be passed. Later, however, objections began to be heard, these objections being based on all sorts of grounds from conscientious scruples to a fear that the doctors would build up a political machine. It being an administrative measure, the committee conferred frequently with the Governor and his assistants and our forces continually were fighting for the measure, and it passed the House with only three dissenting votes.

The passage of House Bill No. 646 in the House was due in a very large measure to the splendid leadership of Dr. Guy B. Mitchell, one of our members who represented Taney County and had charge of the measure in the House; and to the persistent efforts of Drs. M. A. Bliss, M. P. Overholser, C. R. Woodson and G. Wilse Robinson, a special committee appointed to look after this bill. Our special thanks are also due to the following for their work at the legislature: Drs. O. L. Castle of Kansas City (now deceased); T. W. Cotton, Van Buren; W. A. Clark, and Cortez Enloe, Jefferson, and to the following members of the legislature: Drs. A. H. Rickhoff, W. J. Mairs, A. J. Speer, Napoleon Farr and George A. Auerswald; to Senators O. S. Harrison and Michael Kinney, and Representatives Nich Cave, A. T. Dumm and Frank H. Farris.

The Workmen's Compensation Bill experienced a fate somewhat similar to House Bill No. 646. It was refused engrossment in the House on the first vote but later reconsidered and passed by a vote of 122 to 11. The Senate managed to prevent its coming to a vote in that body and it died with the session.

In the Children's Code Commission Bills the medical questions were prepared by this committee.

I wish to call your attention to the law passed by the last General Assembly, making it possible now for counties to vote bonds for the establishment and maintenance of a county general hospital. The law provides specifically and wisely for its administration and maintenance, and makes it possible to care for all classes of sick, including the tuberculous. This law is patterned after the Iowa law, which is working successfully. The law is House Bill No. 746, introduced by Representative Toalson of Howard County. Senator Harris of Boone County introduced the same bill in the Senate. He generously assisted Representative Toalson, letting his own bill die.

The public lectures have been well attended, and apparently appreciated. These lectures have proved helpful and are the means of disseminating useful information among the public to keep well and avoid disease.

We have to announce the great loss to the state, to the communities in which their activities were, and to the medical profession of the state, Dr. William S.

Allee and Dr. John S. Wallace. Dr. Allee, our former President and State Senator for three terms was the originator of the bill for the rebuilding of our present state capitol, and Dr. Wallace was State Senator from the Sixth District. They were specially greatly interested in medical affairs and lent their energies in helping the public and advancing the standard of the physicians and the medical profession. We deeply mourn their loss and miss their presence among us. Let us rise for one moment in memory of the deceased.

R. M. FUNKHOUSER, *Chairman.*

#### REPORT OF THE DEFENSE COMMITTEE

During the past year the committee has had official connection with forty-four cases of alleged malpractice, eleven old and thirty-three new. Ten of these were threatened suits which were not filed in court. These were all handled in such a way that there is little likelihood of their being revived. Of these thirty-four lawsuits, ten have terminated in favor of the defendant; one case resulted in a verdict for \$500 in favor of the plaintiff; four were compromised; nineteen are still pending. In three of the compromised cases the committee agreed to the terms. In one instance a compromise was made despite the protest of the committee.

The committee expresses its thanks and appreciation for the assistance received from the Secretary, Dr. Goodwin, and his assistants, Miss Osburn and Miss Patton; also to those Councilors who have cooperated with us. The financial status of the defense fund has been reported by the Treasurer.

Following its plan of previous years, this committee has endeavored to assist all members who were in need of aid in alleged malpractice claims. It has, nevertheless, refrained from expending any money in the interest of members who were delinquent, or who had in some other way failed to comply with the provisions in our by-laws.

The seeking of revenge for real or imaginary wrong, the possibility of gaining money without much effort, over-activity of certain ambulance-chasing lawyers, as well as the desire for legal processes with its clement of chance for receiving a favorable verdict at the hands of a jury, are all factors which work toward the gradual increase in the number of malpractice suits. There are, however, a goodly number of suits that are instigated or encouraged by the word or action of other doctors.

Every compromise in an unjust demand also stimulates similar claims in the future. Even if the amount paid in such a case is much less than the cost of defending the suit, its effect is the same. A compromise should only be considered in those instances where actual error or malpractice on the part of the defendant appears evident. This should be decided by men who have a thorough professional knowledge of the form of case under consideration. Reasonable skill and conscientious treatment is all that is demanded of us, and with proper advice and management, the outcome of a malpractice suit is rarely unfavorable to the accused doctor.

The patient and his relatives and friends are seldom able to distinguish between improper behavior and actual mistreatment by the doctor. It behooves us, therefore, to be tactful in our dealings with all of our patients. In our experience with malpractice suits we have observed that the plaintiff has, in most instances, some excuse for his attitude. That excuse is usually based on the physician's conduct as a man and not because of his negligence or lack of skill as a doctor.

While only a reasonable degree of skill and care is required of us in the treatment of our patients, we still believe that it is the duty of a medical man

to attend only such patients as he can handle in the proper manner, with or without assistance or professional consultation. The simple employment of a doctor in a given case does not give that doctor the right to hold on to the patient for an indefinite period of time thereafter. Every conscientious physician, who is endowed with the proper requisites to practice medicine, namely, education, experience, and character, will know his limits. Such a man will call assistants and consultants as they are necessary, and, if others are better able to care for the patient he will withdraw in their favor. Such a spirit can only elevate our professional standard, will redound to the benefit of our patients, and add to our credit as a profession, besides safeguarding every physician in the case.

Most of our members are protected by malpractice insurance. In some instances these policies provide only for defense. Others also pay indemnity in case of an adverse verdict.

It is still problematic whether or not this form of protection is in the best interest of the profession at large. This committee, however, has done its best to cooperate with the representatives of these companies. We have not always been able to assist to the fullest extent, and this on account of the attitude of insurance men and lawyers in the employ of insurance companies. Therefore, we take this opportunity to issue a word of caution in regard to the practice of leaving the selection of the policy to the local insurance agent. No insurance company is a charitable institution. None of them are real friends of the medical profession. So the majority of them will evade responsibility wherever possible and will also disregard the interests of the profession in the final disposition of the case.

During the past year one of the cases, which was positively without merit and had once been dismissed by the circuit court for want of sufficient evidence, was compromised over our protest by an insurance company. In this instance the insurance policy did not provide for the payment for indemnity. After repeated and almost constant urging by the attorney, our member became weak and consented to the payment of a nominal sum in compromise. The insurance company paid about two hundred dollars and costs, just because it would have cost more than this amount to defend the case. Most of this money apparently went into the pockets of an unscrupulous damage suit lawyer. There is no doubt that it will stimulate other demands of this nature.

A closer relationship should exist between the rank and file of our membership and the men who are trying to serve them in fighting the ever increasing unjust demands for alleged malpractice. For instance, we believe it the duty of every member to inquire of his Councilor or directly from the defense committee, for information concerning insurance companies and their policies. Such inquiry should precede the acceptance of any malpractice insurance policy.

The defense feature of our Association has been established for a period of years long enough for most of our members to have learned something of the methods employed in preventing, stopping and defending malpractice suits. That the knowledge of its usefulness has not reached a majority of the members is evidenced by the small number who apply to this committee for advice when threatened and before suit has actually been filed.

Every doctor who endeavors to handle the early negotiations in a claim for alleged malpractice, without the active cooperation of a well-informed third party, is wasting precious time. During this period the services of this committee, or those of its local representatives, i. e., the councilor of the district, are of the greatest value. If they were promptly made



acquainted with the facts in a case, a large majority of them would never come to trial.

The method must necessarily vary with each case; but the experience gained from other cases will undoubtedly contribute to our resourcefulness in new cases. Feeling convinced of this, we believe that the individual councilors should have a more intimate acquaintance with this committee. We should be pleased, therefore, to meet with councilors collectively for the express purpose of discussing the cases on hand, and also others which have terminated. We suggest that the Judicial Council arrange for such a conference at each annual meeting of the Association.

Respectfully submitted by the Defense Committee,

C. E. HYNDMAN,

R. EMMET KANE,

ROBERT E. SCHLUETER, *Chairman*.

#### REPORT OF COMMITTEE ON REVISION OF CONSTITUTION AND BY-LAWS

Your committee begs to submit the following brief report:

A resolution offered by your committee last year for a change in the Constitution, and one, a change in the By-Laws, are to come before the Association for action at this meeting. Your committee recommends concurrence in both.

The amendment of the Constitution to be acted on is as follows:

Amend Section 3 of Article VIII of the Constitution by striking out the word "President" in the first line of the section, and create a new section to be known as Section 4 of Article VIII which shall read as follows:

"The President shall be elected by the Association in general session; but no person shall be eligible to the office of President who is not in attendance at the annual session, or who has not been a member of the Association for at least two years."

The Judicial Council suggested the following amendment to the By-Laws on the last day of the 1916 session which shall come up for action at the session this year:

Amend Chapter VII, Section 1 of the By-Laws by striking out the word "daily" between the words "hold" and "meetings" in the first line, and strike out the sentence beginning, "for the ensuing year" in the seventh line and insert in lieu thereof the following sentence: "It shall hold at least one meeting during the annual meeting of the Association after the newly elected Councilors have been announced by the House of Delegates, for reorganization and for outlining the work for the ensuing year," so that the amended section shall read:

"Chapter VII, Section 1. The Council shall hold meetings during the annual meeting of the Association, and at such other times as necessity may require, subject to the call of the chairman or on petition of three councilors. It shall hold at least one meeting during the annual meeting of the Association, after the newly elected councilors have been announced by the House of Delegates, for reorganization and for outlining the work for the ensuing year. At this meeting it shall elect a chairman and a secretary, and the latter shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates at such time as may be provided. It shall be the Executive Committee of the Association during the interval between meetings."

In the judgment of your committee there is nothing further essential at this time.

JABEZ N. JACKSON,

E. F. ROBINSON,

N. P. WOOD, *Chairman*.

#### REPORTS OF COUNCILORS

*First District*, Dr. E. L. Crowson, Pickering, Councilor: The Atchison County Medical Society held two meetings during the year; one on June 28 and one on October 12. Both were fairly well attended and considerable interest was manifested in both the scientific and business sessions. At present there are fourteen members. There are three physicians in the county who do not belong.

The Holt County Medical Society held four meetings during the year. There were six scientific papers read. They have twenty members in good standing and one delinquent. Four physicians in the county do not belong. The condition of the society generally is good.

The Nodaway County Medical Society held six meetings during the year, at which four scientific papers were read. A number of cases were reported and discussed, and matters of general interest to the society were considered. Conditions of the society generally show improvement.

*Second District*, Dr. O. C. Gebhart, St. Joseph, Councilor: I truly appreciate the expression of sympathy extended to me by the Judicial Council at its annual meeting on the 14th inst. There are many things in this world of ours to make us love it but take away the friendships and its shadows would be long and gloomy. I shall always be proud to claim my best friends among the medical profession of Missouri. Mrs. Gebhart was very ill at the time of the annual meeting but I am glad to report she is now on the road to recovery.

The work of the Buchanan County Medical Society has progressed without interruption during the past year. The attendance has been up to the average and the Program Committee has had the undivided support of the members. The society and also the individual members took an active part in obtaining expressions from our people in this district relative to the work of our State Legislature and by so doing created much interest in important legislation that would have otherwise passed without notice.

The Auxiliary Medical Preparedness Committee was promptly organized and has been working faithfully. Through some change of policy of the State Committee on Organization under the National Defense Council, the work was temporarily interrupted but the response here has been very satisfactory.

Seven physicians from Andrew County are members of the Buchanan County Medical Society. The total membership is 125; of this number 82 have paid for 1917.

*Third District*, Dr. G. W. Whiteley, Albany, Councilor: In my district there seems to be a kind of indifference that cannot be overcome as to getting the members out to meetings or getting those who do come to write papers or take part in the programs.

Gentry County Medical Society keeps up the membership by a continual rounding up every year, but withal they are anxious to keep the county in line. Meetings are very poorly attended. Last year there were five meetings called, at two of which no one was in attendance. The president talks the situation over with me often but we have not found the key to the trouble as yet.

Harrison County has a fair number of members but I find they have the same trouble as Gentry. They held two meetings during the year but poorly attended.

I have not received a report from DeKalb County but about two weeks ago I saw the president and he gave me about the same report as for the other counties in my district.

*Fourth District*, Dr. J. B. Wright, Trenton, Councilor: I beg to submit the following report for the Counties of Grundy, Mercer, Putnam and Sullivan, comprising my district:

The work this year is fairly satisfactory. Profitable meetings were held in Grundy, Mercer and Putnam counties. The presence of our State Secretary at the meetings was of great benefit, filling us all with new life and aiding in the collection of dues and interest in future meetings.

I was unable to get in touch with the Sullivan County Medical Society, either by letter or phone, although I asked the secretary to make a date and I would visit them and bring the State Secretary or some other good man with me. As he vouchsafed no reply, I know nothing of the condition of the society.

*Fifth District*, Dr. J. R. Bridges, Kahoka, Councilor: I regret very much at not being able to meet with you at this time on account of sickness in my own family, but my whole heart and sympathies are wrapped up in the one "professional bundle" and I feel sure that my absence is altogether my loss.

Clark County is well organized with all the members a unit on any proposition for the good of the profession. About all the doctors in the county who are eligible are members of the society and all dues are paid. We hold quarterly meetings.

Scotland County is well organized and in good working order. Their meetings are once a month with fairly good attendance and an interesting program at each meeting.

Schuyler County deserves special mention on account of their strong organization, progressive methods and interesting meetings. They meet once a month with a live program and have practically all the eligible doctors in the county enlisted.

*Sixth District*, Dr. A. C. Crank, Canton, Councilor: Adair County Medical Society has a membership of six. There are six eligible doctors in the county who are non-members. Six meetings were held during the year, with one clinic and four scientific papers. The Councilor made one visit to this society and they received five official communications.

Knox County Medical Society has a paid membership of five; seven are delinquent. They have held one regular meeting during the year and one special meeting. Three scientific papers were read and they received five official communications.

Lewis County Medical Society has a paid membership of fifteen; five are delinquent. They have had one death in the county and have admitted two new members. Six regular meetings have been held. They have had two official visits from the Councilor and three official communications.

*Eighth District*, Dr. L. W. Cape, Maplewood, Councilor: I herewith report a healthy condition of my district. Everything being harmonious, each county has been made ready to respond with assistance in all legislative matters looking to the best interests of organized medicine. All counties have an organization with the exception of Lincoln County. Some of the Lincoln County doctors are working with adjoining counties, notably among them being Dr. F. V. Keeling of Elsberry, who is ably serving Pike County as its secretary. Pike County meets about once a month, meeting at various points throughout the county. Occasionally they have a joint meeting with the Pike County, Ill., society.

St. Charles County is doing good work, meeting quarterly in various parts of the county, and getting together annually for their general good time and fish fry.

St. Louis County has meetings monthly, meeting place, City Hall, Webster Groves. They have had some excellent papers during the year and had a fair attendance at the meetings. It is their custom to give an annual banquet at Clayton which they gave last January.

*Ninth District*, Dr. A. R. McComas, Sturgeon, Councilor: The Boone County Medical Society has been doing excellent work during the year just passed, holding regular and interesting meetings with a good attendance and the scientific programs have been excellent.

Callaway County is doing good work, as it has for a number of years past.

There has been some inclination on the part of Warren County to organize a society but so far it has not been perfected. In the rest of the district conditions are about as they were last year.

*Tenth District*, Dr. D. A. Barnhart, Huntsville, Councilor: I regret very much indeed, that it will be impossible for me to be with you at the Springfield meeting but circumstances are such that it is impossible for me to be present.

I appreciate the honor of having been appointed Councilor for this the Tenth District. I have tried to do the best I could. Our county society, owing to the lack of interest of the Moberly physicians, has not accomplished much. However, I feel that I have done my part as I have made three special trips to Moberly to try "boosting" them and getting them interested but it is a hard problem.

Macon County Medical Society is doing good work. They meet monthly and have good programs.

I have written and phoned to the secretary of Monroe County Medical Society and asked him to let me know when they had their regular meeting and if they were not meeting regularly to call a meeting and I would visit them, but I have not heard from him and consequently did not get to meet with them.

I sent several telegrams and phone messages to different parties during the session of the State Legislature and believe they were effective from the letters I received in reply.

*Eleventh District*, Dr. G. W. Hawkins, Salisbury, Councilor: My district, composing the counties of Chariton, Carroll, Livingston and Linn, is in good average working order, Linn County having the largest membership, 36 all paid. Chariton County has a full paid-up membership of 16, Carroll 16 and Livingston 20.

*Fifteenth District*, Dr. H. S. Crawford, Harrisonville, Councilor: The fifteenth district is active and the interest in medical organization is excellent. Cass County has a paid membership of thirty, and nine non-members.

Johnson County has twenty-two members, all paid but one, and nine non-members. The meetings are very well attended considering that this district is made up of rural physicians. Both counties hold meetings every other month. We make one of these a joint meeting and thus promote a mutual neighborly feeling. The members are all good in responding to the calls of the program committee. The influence of the society is noticeable in the attitude of the public toward our organization, and a spirit of harmony prevails among the local physicians.

*Sixteenth District*, Dr. E. N. Chastain, Butler, Councilor: I am sending my report as I am in a case I cannot leave. I am sorry but it is impossible to get away today. May get there tomorrow.

Barton County Medical Society has a membership of ten. There are nine doctors in the county eligible to membership who do not belong. Four meetings were held during the year with two scientific papers. Dr. A. D. Craig of Lamar is president and Dr. A. B. Stone is secretary and treasurer. Dr. Stone says they are putting new life into their society. They have a full paid-up membership.

Bates County Medical Society has a membership of twenty-eight. There are five eligible doctors in the county who do not belong. Twelve meetings were held during the year with fifteen scientific papers



read and six clinics presented. Dr. J. H. Fletcher is president and Dr. J. S. Newlon is secretary and treasurer.

Cedar County Medical Society has a membership of nine. There are twelve other doctors in the county who ought to affiliate with the organization. There were six meetings held during the year and six scientific papers read. Dr. R. O. Crawford is president and Dr. J. R. Williams is secretary and treasurer.

Dade County Medical Society has a membership of three—all paid. There are nine other doctors in the county eligible to membership. No meetings have been held during the year and the 1916 officers held over. Dr. T. J. Massey of Lockwood is president and Dr. J. L. Rawhauser of Greenfield is secretary and treasurer.

Vernon County Medical Society has a membership of twenty-seven—all paid. They have held four meetings during the year, at which eight scientific papers were read, twenty-one operations performed and twenty-two medical clinics held. Dr. E. A. Dulin is president and Dr. J. T. Hornback is secretary and treasurer.

*Seventeenth District*, Dr. W. J. Ferguson, Sedalia, Councilor: As your Councilor for the Seventeenth District I beg leave to make the following report:

Benton County Medical Society was in second place on the Honor Roll in 1916 but dropped to seventh in 1917. They have fourteen members. During the year one meeting was held at Lincoln, April 26. The next meeting will be at Cole Camp at the call of the president. The financial status of this society is good but the very enthusiastic members are few in attendance. Dr. J. R. Smith is the very able secretary.

Henry County Medical Society has a paid-up membership of thirty-three. They have lost six members by death and removal, one dropped and one advanced to honor position. They have held seven sessions at which twelve papers were read and discussed and forty cases were reported. Dr. F. M. Douglass is secretary.

Pettis County Medical Society has thirty-seven members in good standing, of which one is now in a military hospital in London, and another is on his way to the front in France to serve in the U. S. Medical Corps. Two others have enlisted but not yet ordered out and two or three others have applications pending with the war department. During the year eight new members have been added, two members have died, one expelled and two suspended. Fourteen meetings have been held at which eight papers were read and discussed. The society is in a flourishing condition and the harmonious fellowship of its personnel is one of its characteristic features.

Hickory County Medical Society is organized with six or seven members but no meeting was held in 1917. They promise to do better in future.

St. Clair County, I am very happy to say, is in the process of organization and will soon be asking for admission into our State Association.

*Nineteenth District*, Dr. S. V. Bedford, Jefferson City, Councilor: The condition of the medical profession in Cole County is good. Most all the physicians that are eligible have affiliated with the society and the best of feeling exists among the physicians. Regular monthly meetings are held through the autumn, winter and spring. On several occasions clinical meetings were held at the prison hospital at which there was an abundance of material. The Legislature having been in session the past winter, legislative matters affecting the medical profession and public welfare were introduced. The society as a whole and as individuals were very active in opposing or supporting measures as they thought best for the public welfare and the profession.

The Counties of Gaconade, Maries and Osage are organized under one society. The members are so scattered that it is impossible to hold meetings very often. The plan that has been adopted is to hold an all-day and an evening session at some of the more accessible towns, and very interesting and successful meetings have been held. Members of the profession from other societies were asked to contribute to the programs to which they responded very readily. Dr. Fred. Aufder Heide is president and Dr. John D. Seba is secretary and treasurer.

*Twentieth District*, Dr. A. H. Hamel, St. Louis, Councilor: The St. Louis Medical Society is in a most satisfactory condition, having a total membership of 948, classified as follows: active members in good standing, 675; delinquent, 167; honor members (state assessment paid from the society treasury) 16; corresponding members, 49; associate members, 4; honorary members (distinguished members of the profession not residing in St. Louis) 37. The society therefore comes to this State Meeting with fourteen accredited delegates. This is probably the largest number of delegates ever accredited to the St. Louis Medical Society. Meetings are held regularly every Saturday evening except during the summer vacation period, from the third Saturday in June to the third Saturday in September. The meetings have been well attended and the programs have been of a very high character. I am pleased to report a most gratifying activity of the entire membership relative to legislative matters. The society has given much assistance to your Council on Health and Public Instruction. Much space in the official Bulletin was used to acquaint the members as to legislative matters during the recent legislative session, setting forth the desirability of certain bills and the urgent need of energetic opposition to offensive and objectionable bills, thus rendering much help in the defeat of obnoxious measures. The members of the society have demonstrated a splendid patriotic spirit to our government in this crisis, as 125 members have applied, qualified and been accepted as members of the Officers' Medical Corps and are ready for active duty when needed.

The Franklin County Medical Society is in a healthy condition as to numbers, having a membership of twenty-five. They have held two regular and one special meeting during the year. The attendance at meetings is not what it should be, but the programs have been good. The members of the Franklin County Medical Society have been alert and active and have rendered valuable service in defeating vicious legislation.

*Twenty-Fourth District*, Dr. T. W. Cotton, Van Buren, Councilor: As Councilor for the twenty-fourth district I beg leave to submit the following report:

The Carter-Shannon County Medical Society has not been very active so far as meetings go, however, the members have been prompt to pay dues and have been responsive in legislative matters when called on to request action of the representatives in the Legislature.

The Wayne County Medical Society has held meetings occasionally during the year and report is fairly favorable.

The Butler-Stoddard County Medical Society did not maintain its former activity during the first part of the present year. This society has for a good many years been the most active in my district. On February 23 I made an official visit and we had a very interesting session. This meeting was followed a few weeks later by a visit from the Secretary of the State Association and the outlook is better for a live organization again.

*Twenty-Eighth District*, Dr. T. O. Klingner, Springfield, Councilor: There is nothing of importance to report from the twenty-eighth district. The county societies are all in good working condition. There has been one occasion to call on the Defense Committee for aid during the past year. The societies gave prompt and willing support to their respective representatives and senators during their labors at the last session of the Legislature, which had its influence, as evidenced by beneficial results.

Dallas County is yet unorganized. I have corresponded with some of the leading physicians in the county and they prefer to join either Greene or Polk County societies where there is already a good, strong organization, than to attempt to build up an organization with so few members. Greene County Society has already accepted one member from Dallas County and I expect two or three more this year. All of the societies hold regular meetings and the attendance and interest in all are good. There are yet a few eligible physicians who are not members. One great need of the twenty-eighth district is assistance from the State Association to prosecute and rid the district of chiropractors. It is of more importance than defense in alleged malpractice suits.

*Twenty-Ninth District*, Dr. R. L. Wills, Neosho, Councilor: I shall begin my report with the Jasper County Medical Society, as this organization is by far the most active in my district. Jasper County has one of the most active and interesting county societies in the state. It was my pleasure to meet with them and enjoy their hospitality during the year just past and their zeal is certainly inspiring.

McDonald County has an interesting society. It is not so large in numbers but they have some very zealous members.

Newton County has a very active county society. The members are without exception very loyal to each other and to the Association. All in all, I think that organized medicine in the twenty-ninth district will compare favorably with most districts in the state.

#### REPORT OF THE COMMITTEE ON NECROLOGY

Agreeable to custom, your Committee on Necrology has endeavored to make a complete and correct record of the deaths occurring in the membership, giving, where possible, the correct name and residence of the deceased members, his parentage and place of birth, when known, and other important data that might be of interest to the Association.

The committee thinks that such a report is important and believes that the secretary of each county and city society should be asked to cooperate in its preparation, by furnishing the details in regard to each death occurring in his society.

If any names properly belonging in this report have been omitted, the omission should be charged to the local secretary rather than to this committee; for the reason that a letter of inquiry was mailed to each secretary and every name reported has been included.

B. R. McALLASTER,  
F. M. VESSELLS,  
T. J. DOWNING,  
M. B. AUSTIN,  
J. A. POSTLEWAIT,  
*The Committee.*

#### Delbert Claude Adcock, M.D.

Dr. D. C. Adcock of Warrensburg, Mo., a graduate of the University Medical College, Kansas City, 1904, died at his farm home near Hickman, Mo., Sept. 18, 1916, aged 36 years. Dr. Adcock had been in poor health for several years and had not been in active practice. He was a son of Dr. J. A. B. Adcock, present secretary of the State Board of Health.

#### William Sylvanus Allee, M.D.

Dr. William S. Allee of Olean, was born in Moniteau County, Mo., and obtained his preliminary education in the district schools of this state and at the State University. He taught school between terms and actually earned his medical education which he obtained at Rush Medical College and the Missouri Medical College, graduating from the latter in 1875. Dr. Allee was one of the best known medical men in Missouri, having been president of the State Medical Association in 1907-1908 and its treasurer at the time of his death. He had served four terms as state senator and stood very high in financial and business circles. He died in Wesley Hospital, Kansas City, Oct. 9, 1916, following an operation for intestinal obstruction; aged 64.

#### Herschel D. Baker, M.D.

Dr. Herschel D. Baker of Springfield graduated from the Medical Department of the University of Michigan in 1883, and had specialized on diseases of the eye, ear, nose and throat. He died at his home, Aug. 14, 1916; was a member of county and state societies.

#### Z. T. Blackwell, M.D.

Dr. Z. T. Blackwell of Joplin, a graduate of the Kentucky School of Medicine, Louisville, Ky., class of 1888, died at his home in January, 1917, of pneumonia, aged 55 years. He was a member of the Jasper County Medical Society and the State Association.

#### Charles P. Bowden, M.D.

Dr. Charles P. Bowden of Appleton City, Mo., was graduated from Jefferson Medical College, Philadelphia, in 1891. He died at his home in Appleton City, April 20, 1916. He was an active member of the Bates County Society and the State Association.

#### O. N. Carter, M.D.

Dr. O. N. Carter of Republic graduated from the Medical Department of the University of the South, at Sewanee, Tenn., 1900. Died March 27, 1917. Was a member of county and state societies.

#### Otto L. Castle, M.D.

Dr. O. L. Castle of Kansas City, a graduate of the Medical Department of Michigan University, 1909, died at his home, April 25, 1917, of pneumonia, aged 33 years. He was a prominent and active young physician and a member of county and state societies.

#### Ben Rogers Downing, M.D.

Dr. B. R. Downing of Disloye, St. Francois County, died April 19, 1917, of abscess of lung.

#### James L. Downing, M.D.

Dr. J. L. Downing, an old and respected practitioner of Eagleville, Harrison County, Mo., died at his home April 28, 1917, after a continuous practice of more than fifty years in this village. Dr. Downing graduated from St. Louis Medical College in 1857, and has seen Harrison County develop from a sparsely settled frontier to a prosperous and up to date farming region.

#### James W. Dreyfus, M.D.

Dr. J. W. Dreyfus, a graduate of the Washington University Medical School, and one of the leading practitioners of his section of the state, died at his home in Louisiana, Mo., Aug. 19, 1916, from apoplexy, aged 65 years. He was a member of county and state societies.



**Dexter B. Farnsworth, M.D.**

Dr. D. B. Farnsworth of Springfield graduated from Rush Medical College in 1877. He died at his home in Springfield, Jan. 22, 1917. He had specialized in eye, ear, nose and throat diseases, and was an active member of his county society.

**John Ford, M.D.**

Dr. John Ford of Williamstown has been reported deceased, but no particulars were furnished to the committee. He was a graduate of Willamette University Medical School, located at Salem, Ore., class of 1871.

**William H. Gibbins, M.D.**

Dr. William H. Gibbins of Clinton, Mo., was graduated from The Medical College of Ohio in 1873. He practiced in Petersburg, Ill., until 1882, when he located in Clinton, where he died of apoplexy, May 8, 1916, aged 65 years.

**Edward O. Greer, M.D.**

Dr. E. O. Greer died at his home in St. Louis, May 27, 1916, from nephritis, aged 51 years. Dr. Greer was born in Ohio, took his medical degree in Marion-Simms Medical College in 1893. Was an active county and state society member.

**J. O. Guhman, M.D.**

Dr. J. O. Guhman of St. Louis has been reported deceased but the committee was unable to get the particulars. He graduated from the Missouri Medical College of St. Louis in 1889.

**Charles H. Hughes, M.D.**

Dr. Charles H. Hughes of St. Louis, a widely known specialist in nervous and mental diseases, died at his home, July 13, 1916, aged 77 years. Dr. Hughes was born in St. Louis and obtained his medical education in the St. Louis Medical College from which he graduated in 1859. He was for some time superintendent of the Fulton State Asylum and later was editor of the *Alienist and Neurologist*. Dr. Hughes was one of the alienists who testified at the trial of Charles Giteau, the assassin of President Garfield and it was partly through his influence that the assassin was found to be mentally responsible for the crime.

**Jesse Edwards Hunt, M.D.**

Dr. J. E. Hunt of Kansas City died at his home April 29, 1916, of laryngeal diphtheria, contracted while attending patients in the diphtheria ward of the hospital. Dr. Hunt graduated from the Western Reserve Medical School in 1902, and was at the time of his death 38 years of age.

**Wilson A. Kendall, M.D.**

Dr. W. A. Kendall, formerly of Poplar Bluff, Mo., died at the home of a relative in Griggsville, Ill., Dec. 29, 1916. He was a graduate of the Beaumont Hospital Medical College, 1891, and was a member of the Butler County Medical Society and the State Association.

**Henry C. Lundy, M.D.**

Dr. Henry C. Lundy was born in Berryville, Ark., April 24, 1852, and died at Pleasant Hope, Mo., July 28, 1916, aged 64 years. He was a graduate of Central Medical College and a member of county and state societies.

**Carl J. Luyties, M.D.**

Dr. Carl J. Luyties of St. Louis, for thirty-three years a practitioner in that city, died at his home Dec. 23, 1916, of apoplexy, aged 57 years. He was a graduate of the Missouri Medical College, 1884, and an active and influential physician.

**J. W. McClanahan, M.D.**

Dr. J. W. McClanahan of Forest City has been reported deceased but no particulars were furnished the committee. He graduated from the Ensworth Medical College of St. Joseph, 1889.

**Charles Elliot Martin, M.D.**

Dr. C. E. Martin of Carruthersville, a member of the Pemiscot County Medical Society and of the State Association, died Jan. 22, 1917, of apoplexy. Dr. Martin was a graduate of the St. Louis College of Physicians and Surgeons.

**Elijah F. Miller, M.D.**

Dr. E. F. Miller of Verdella, was one of the older physicians of the state, graduating from Bennett Medical College, Cincinnati, in 1878, and from St. Louis Medical College, 1880, also graduating in dentistry from Western Dental College in 1896. He located in Verdella in 1897 and continued in the one locality until his last illness, which developed as an attack of pneumonia, beginning February 22 and terminating March 21, 1917. Dr. Miller was a member of the Barton County Medical Society and the Missouri State Medical Association and was 60 years of age.

**William Wallace Mosby, Jr., M.D.**

Dr. W. W. Mosby, Jr., of Richmond, a graduate of Missouri Medical College, St. Louis, 1882, died at his home of neuritis, April 7, 1916. Dr. Mosby had resided in Richmond for more than thirty years and for most of these years had been a sufferer from the disease that caused his death. He had been totally blind for twenty years.

**Alva Naylor, M.D.**

Dr. Alva Naylor of Plattsburg, Mo., was born in Platte County, Nov. 22, 1870, graduated from the University Medical College of Kansas City, 1905. Just four days before his death, he removed from Platte City, where he had practiced for ten years, to Plattsburg, intending to continue his practice at the latter place. While driving to Platte City, Feb. 19, 1917, his automobile overturned and he was killed. Dr. Naylor had held every office of trust in his county society and was an active member and an enthusiastic physician. He was the delegate of the Platte County Society to the State Association and had been selected to read a paper at the Springfield meeting.

**Walter C. Overstreet, M.D.**

Dr. W. C. Overstreet of Sedalia was a graduate of Bellevue Hospital Medical College, class of 1882. He died in Kansas City after a protracted illness, May 18, 1916, aged 49 years. Dr. Overstreet was the son of a physician, Dr. W. C. Overstreet, deceased.

**Paul Paquin, M.D.**

Dr. Paul Paquin, medical director of the Hospital and Health Board of Kansas City, died June 23, 1916, of tubercular meningitis, aged 56 years. He was a Canadian by birth, a graduate of McGill University and later of the University of Missouri, where he took his medical degree in 1887. He was professor of bacteriology and pathology in the State University for several years and was secretary of the State Board of Health, 1896-1899. He fell a victim to the dread disease which he had tried so hard to conquer.

**David R. Porter, M.D.**

Dr. D. R. Porter of Kansas City, a graduate of the College of Physicians and Surgeons of Keokuk and of Bellevue Hospital Medical College, died at his home, Dec. 14, 1916, aged 78 years. He was a pioneer physician of Kansas City and was the oldest member, both in years and in membership, of the Jackson County Medical Society.

**Thompson Eldridge Potter, M.D.**

Dr. T. E. Potter of St. Joseph was for many years one of the best known and most highly respected physicians of the northwest part of Missouri. He was born in Clinton County, Mo., in 1849, obtained his preliminary education in the public schools of the state and his medical degree at Jefferson Medical College, Philadelphia. He was one of the founders of Central Medical College of St. Joseph and occupied the chair of surgery in that institution as well as in the Ensworth College, after the consolidation. He died at his home there, April 29, 1916, after a lingering illness, aged 66 years.

**C. L. Poynter, M.D.**

Dr. C. L. Poynter of Eldridge, Laclede County, died at his home, Jan. 15, 1917, of pneumonia, aged 85 years. He was a member of county and state societies.

**Francis W. Rathbone, M.D.**

Dr. F. W. Rathbone of Kansas City, a graduate of the Jefferson Medical College, 1883, died in the St. Joseph Hospital in Kansas City, after a lingering illness, Dec. 10, 1916, aged 60 years.

**W. W. Rodman, M.D.**

Dr. W. W. Rodman of Pierce City has been reported deceased but no particulars are available. He graduated from the College of Physicians and Surgeons, Keokuk, 1875.

**Hilliard James Rowe, M.D.**

Dr. H. J. Rowe of Willow Springs died June 17, 1916, following a long illness from cancer and other complications. Aged 57 years. He was a member of county, state and national societies and a leading physician of his section of the state.

**Edward W. Schaffler, M.D.**

Dr. E. W. Schaffler of Kansas City, a graduate of the New York College of Physicians and Surgeons, died at his home Oct. 24, 1916, of pneumonia. Dr. Schaffler was born of missionary parents in Vienna, Austria; spent most of his youth in southern Europe, where he acquired proficiency in several languages. He was an interpreter for the British Army in the Crimea and later was an attache in the American Embassy at Constantinople. He finished his American education in Williams College and took his medical degree in the College of Physicians and Surgeons of New York City, locating in Kansas City in 1868. Dr. Schaffler served in many places of honor and was recognized as an example to young men, both as a physician and as a citizen.

**Edgar Moore Senseney, M.D.**

Dr. E. M. Senseney, a graduate of St. Louis Medical College, class of 1887, died at his home there, April 7, 1916, aged 61 years. Dr. Senseney was born in Winchester, Va., and obtained his preliminary education at Central College, Fayette, Mo. He was for a number of years a teacher in his alma mater, and was widely known as a physician and scientist. It is said that Dr. Senseney was the first physician in St. Louis to use an automobile in his practice.

**William M. Shankland, M.D.**

Dr. W. M. Shankland of Clinton, Mo., died at his home, July 16, 1916, of apoplexy, aged 56 years. Dr. Shankland was born in Camden County Mo., attended the State University and graduated in medicine at the Missouri Medical College in 1885. He had been president and secretary in his county medical society and was a member of the state association.

**Charles D. Stevens, M.D.**

Dr. C. D. Stevens of St. Louis, a graduate of Washington University Medical School, class of 1878, died at his home in St. Louis of arteriosclerosis, April 9, 1916, aged 64 years. Dr. Stevens was the son of Dr. Charles W. Stevens, a pioneer St. Louis physician.

**Ambrose Talbott, M.D.**

Dr. Ambrose Talbott of Kansas City was born in Freeport, Me.; obtained his medical degree in Harvard Medical College, graduating with the class of 1886. He was for several years an instructor in the Kansas City Medical College. Death was due to apoplexy June 1, 1916.

**John S. Wallace, M.D.**

Dr. John S. Wallace of Brunswick, a graduate of Bellevue Medical College, 1873, died very suddenly of heart disease, Aug. 24, 1916, aged 67 years. Dr. Wallace was born near Glasgow, Mo., where he spent his youth. He was vice president of this Association in 1912 and served as state senator from 1914 until his death.

**James T. Warren, M.D.**

Dr. James T. Warren of Sprague, a graduate of the St. Louis Medical College, 1871, and Jefferson Medical College, 1882, died of arteriosclerosis, Nov. 19, 1916, at the home of his son-in-law, Minneapolis, Kan., aged 72 years. He was one of the pioneer physicians of Bates County.

**Bertan H. Wheeler, M.D.**

Dr. B. H. Wheeler, Kansas City, a graduate of Kansas City Medical College, class of 1894, died at his home there, April 27, 1916, of chronic nephritis. Dr. Wheeler was born in DeKalb County, Mo. He served as coroner of Jackson County, being elected in 1900. He was a member of county, state and national medical societies.

**Vincil O. Williams, M.D.**

Dr. V. O. Williams of Nevada, Mo., was found dead in his automobile, standing on the roadside, June 24, 1916. Dr. Williams was born in Morgan County, Mo., and was the son of Dr. O. A. Williams, who practiced medicine in this state for fifty years. Dr. Williams was a graduate of St. Louis University, class of 1904, had served a term as assistant physician at the Nevada Asylum and at the time of his death was chief surgeon on the staff of Brigadier-General Clark at the Mobilization Camp of the National Guard of Missouri.

**MEMBERS REGISTERED AT THE SIXTIETH  
ANNUAL MEETING, SPRINGFIELD,  
MAY 14, 15, 16, 1917**

Allder, John, Cane Hill  
Alle, G. D., Lamar  
Allen, W. H., Rich Hill  
Ames, Alfred C., Mountain Grove  
Anderson, A. L., Springfield  
Armstrong, A., Springfield



- Atkins, W. A., Rogersville  
 Atherton, J. LeRoy, Springfield  
 Atherton, Mary Jean, Springfield  
 Bailey, E. M., Elkland  
 Bailey, Harold, Springfield  
 Baldwin, F. V., Forsyth  
 Barnes, Francis M., St. Louis  
 Barnes, G. W., Springfield  
 Barney, R., Chillicothe  
 Bartels, Leo, St. Louis  
 Baumgarten, Walter, St. Louis  
 Baysinger, S. L., Rolla  
 Beatie, W. R., Springfield  
 Beaty, J. G., Clinton  
 Bedford, S. V., Jefferson City  
 Benage, O. C., Conway  
 Blankenship, E. P., Houston  
 Blaylock, Geo. A., Perryville  
 Bliss, M. A., St. Louis  
 Bohannon, W. T., Nevada  
 Bohon, P. T., Kansas City  
 \*Bonham, J. M., Hobart, Okla.  
 Box, E. M., Springfield  
 Boyd, J. R., Springfield  
 Bradley, E. H., Springfield  
 Braecklein, W. A., Higginsville  
 Breuer, R. E., Newburg  
 Brosius, W. L., Gallatin  
 Brown, Chas. H., Fair Play  
 Brown, F. H., Billings  
 Bruce, John R., Marshfield  
 Brunner, E. E., Carrollton  
 Bruton, J. W., Ozark  
 Bruton, T. S., Seymour  
 Burdett, C. W., Ava  
 Burford, C. E., St. Louis  
 Buck, U. G., Rothville  
 Burke, John P., California  
 Camp, W. A., Springfield  
 Cape, L. W., Maplewood  
 Caulk, John R., St. Louis  
 Chaffin, W. F., Raymore  
 Chapman, A. W., Charleston  
 Chipp, Joseph K., New Hampton  
 Chilton, J. A., Van Buren  
 Clapp, C. B., Moberly  
 Clark, A. Benson, Joplin  
 Clark, W. A., Jefferson City  
 Claiborn, E. G., Decaturville  
 Coffelt, Theo. A., Springfield  
 Collier, A., Avalon  
 Colson, J. R., Schell City  
 Conover, C. C., Kansas City  
 Cope, J. Q., Lexington  
 Cotton, T. W., Van Buren  
 Coughlin, W. T., St. Louis  
 Cox, Lee, Springfield  
 Craig, T. B. M., Nevada  
 Crane, T. V. B., Springfield  
 Crawford, H. S., Harrisonville  
 Crowson, Eugene L., Pickering  
 Culpepper, W. S., Willow Springs  
 Cummings, C. C., Joplin  
 Cuppaidge, G. O., Moberly  
 Curdy, R. J., Kansas City  
 Dean, L. E., Maryville  
 Delamater, G. A., Rich Hill  
 Delzell, W. A., Springfield  
 DeVilbiss, Frank, Tipton  
 Dewey, J. E., Springfield  
 Dickson, Frank D., Kansas City  
 Dill, R. D., Humansville  
 Donaldson, C. O., Kansas City  
 Dorrell, G. B., Springfield  
 Douglass, F. M., Clinton  
 Drake, W. D., Bolivar  
 Drechsler, D. Louis, St. Louis  
 Duke, W. W., Kansas City  
 Dumbauld, B. A., Webb City  
 Dunaway, Jane E., Eldorado Springs  
 Edens, L. M., Cabool  
 Edmondson, M. T., Fair Grove  
 Elkins, C. B., Springfield  
 Elliott, J. H., West Plains  
 Engelbach, Wm., St. Louis  
 Estill, W. G., Lawson  
 Evans, E. L., Springfield  
 Ewell, W. D., Fair Grove  
 Farmer, Lee, Hartville  
 Farthing, R. R., Sparta  
 Ferguson, J. P., Springfield  
 Ferguson, W. J., Sedalia  
 Forgrave, H. S., St. Joseph  
 Frame, H. G., Cave Spring  
 Frischer, Julius, Kansas City  
 Frick, Wm., Kansas City  
 Frick, Wm. J., Kansas City  
 Fulbright, J. H., Springfield  
 Funkhouser, Robert M., St. Louis  
 Furnish, J. A., Shelby  
 Fuson, J. A., Mansfield  
 Fulton, W. J., Mt. Vernon  
 Fuson, F. B., Springfield  
 Gaines, J. J., Excelsior Springs  
 Gayler, W. C., St. Louis  
 Gentry, W. H., Carthage  
 Gillmor, Wm. L., Mt. Washington  
 Glynn, Robert R., Springfield  
 Good, John W., Fordland  
 Green, John, Jr., St. Louis  
 Gregg, A. M., Joplin  
 Griffith, J. D., Kansas City  
 Gum, P. D., West Plains  
 Hahn, C. N., Dunnegan  
 Haire, Robert D., Clinton  
 Hall, C. Lester, Kansas City  
 Hall, O. B., Warrensburg  
 Hamel, A. H., St. Louis  
 Hamilton, Buford G., Kansas City  
 Hampton, J. R., Clinton  
 Handley, W. E., Springfield  
 Harris, James A., Mt. Vernon  
 Hawkins, A. S., Monett  
 Hawkins, G. W., Salisbury  
 Hays, Bernard W., Jackson  
 Henderson, James P., Kansas City  
 Henson, L., Galena  
 Hetherington, E. M., Kansas City  
 Hill, H. S., Springfield  
 Hill, Roland, St. Louis  
 Hogeboom, R. W., Springfield  
 Horst, O. C., Springfield  
 Hoxie, George H., Kansas City  
 Huffman, D. M., Springfield  
 Hughes, Marc Ray, St. Louis  
 Hunt, L. L., Fair Play  
 Hyndman, C. E., St. Louis  
 Jackson, Jabez North, Kansas City  
 James, Edwin F., Springfield  
 James, L. S., Blackburn  
 James, R. M., Joplin  
 Johnson, S. A., Springfield  
 Jones, George H., Jefferson City  
 Kane, R. Emmet, St. Louis  
 Kerr, H. L., Crane  
 Kerr, U. F., Springfield  
 Kerwin, Wm., St. Louis  
 Kessler, E. H., St. Louis  
 Kitchen, W. B., Glasgow  
 Klingner, Thos. O., Springfield

\* Guests.

- Knabb, Arthur D., Springfield  
 Knabb, Enoch, Springfield  
 Koch, Otto W., Ballwin  
 Koetter, Albert F., St. Louis  
 \*Kurtz, R. L., Nowata, Okla.  
 Kyger, Fred B., Kansas City  
 LeCompte, E. M., Brookline  
 \*Lemon, A. L., Riley, Kan.  
 Lemmon, G. B., Springfield  
 Lindsay, J. W., Orla  
 Long, Frank B., Sedalia  
 Lovc, Joseph W., Springfield  
 Loveland, W. S., Verona  
 Lowe, H. A., Springfield  
 Lucas, H. R., Joplin  
 Luckey, F. S., Festus  
 Lyter, J. Curtis, St. Louis  
 Mann, F. W., Wellington  
 Marshall, A. H., Charleston  
 Martin, Clarence, St. Louis  
 McAlester, A. W., Columbia  
 McAlester, A. W., Jr., Kansas City  
 McAllaster, B. R., Carthage  
 McCallum, F. M., Kansas City  
 McCandless, O. H., Kansas City  
 McComas, A. R., Sturgeon  
 McComb, J. A., Lebanon  
 McComb, J. L., Lamar  
 McHaffie, C. H., Ash Grove  
 \*McHenry, D. D., Oklahoma City  
 McKay, H. S., St. Louis  
 McNees, A. J., Clinton  
 Miles, Horine, Webster Groves  
 Matthews, F. H., Liberty  
 Matthews, J. C., Springfield  
 Massey, T. J., Lockwood  
 May, H. A., Washington  
 Meade, R. H., Kansas City  
 Miller, W. G., Morrisville  
 Mills, S., Macks Creek  
 Mitchell, Guy B., Branson  
 Mook, W. H., St. Louis  
 Moore, C. A., Aurora  
 Moore, J. G., Mexico  
 Morton, Daniel, St. Joseph  
 Murphy, Franklin E., Kansas City  
 Mynatt, A. J., Jerico Springs  
 Myers, G. T., Macks Creek  
 Neely, J. E., Elmo  
 Neff, Robt. L., Joplin  
 Neilson, C. H., St. Louis  
 Nifong, Frank G., Columbia  
 Norman, J. B., Tipton  
 Norman, R. M., Ava  
 North, Emmett P., St. Louis  
 Nulton, Ida M., Livonia  
 O'Dell, T. T., Marionville  
 Ogelvie, R. K., East Prairie  
 Oliver, Evertt A., Richland  
 O'Reilly, Archer, St. Louis  
 Overholser, M. P., Harrisonville  
 Owens, J. H., Sweet Springs  
 Parker, H. F., Warrensburg  
 Pare, E. Y., Luton  
 Patterson, W. P., Springfield  
 Pipkin, R. L., Springfield  
 Pifer, J. D., Joplin  
 Pitzman, Marsh, St. Louis  
 Potter, Caryl, St. Joseph  
 Potts, J. M., Springfield  
 Rabenau, W. J., Fordland  
 Randall, Leslie, Licking  
 Rawlins, E. V., Elwood  
 Rayl, J. E., Crocker  
 Reder, Francis, St. Louis  
 Redman, Spence, Platte City  
 Reid, H. L., Charleston  
 Reser, J. H. H., Conway  
 Reser, T. S., Cole Camp  
 Richey, Robert, Urbana  
 Rienhoff, Wm., Springfield  
 Riley, W. R., Everton  
 Roberts, J. F., Bolivar  
 Robertson, R. C., Aurora  
 Robinson, G. Wilse, Kansas City  
 Robinson, J. F., Nevada  
 Rooks, O. R., Trenton  
 Roberts, M. G., Marshfield  
 Rogers, R. M., Mansfield  
 Roseberry, E. C., Springfield  
 Ross, L. C., Springfield  
 Rudd, W. E., Salem  
 Russell, C. W., Springfield  
 Russell, R. Lee, Humansville  
 Ryan, R. A., Norwood  
 Ryland, C. T., Lexington  
 Sanders, St. Elmo, Kansas City  
 Sayers, J. S., Rogersville  
 Schlicht, W. F., Niangua  
 Schlueter, Robert E., St. Louis  
 Schmitz, Edgar F., St. Louis  
 Schoemaker, D. M., St. Louis  
 Schofield, L. J., Warrensburg  
 Schwald, N. A., Cole Camp  
 Searcy, W. P., Exeter  
 Seba, John D., Bland  
 Sevier, Robert, Richmond  
 Sheldon, John G., Kansas City  
 Shelton, M. C., Joplin  
 Sherman, D. U., Springfield  
 Shy, D. E., Knobnoster  
 Shy, M. P., Sedalia  
 Smith, C. A., Osceola  
 Smith, C. A., Liberal  
 Smith, S. D., Cowgill  
 Smith, J. Will, Verona  
 Smith, Wm. M., Springfield  
 Smith, Wallis, Springfield  
 Smith, Wilbur, Springfield  
 Spivy, Raymond M., St. Louis  
 Squibb, H. W., Halfway  
 Stauffer, W. H., St. Louis  
 Stebbins, N. I., Clinton  
 Stone, M. C., Springfield  
 Stufflebam, A. J., Humansville  
 Swahlen, Percy H., St. Louis  
 Talbott, Hudson, St. Louis  
 Taylor, B. E., Brighton  
 Thornburgh, A. H., West Plains  
 Thompson, Ralph L., St. Louis  
 Tickle, Solomon W., Springfield  
 Timberman, John H., Marston  
 Titsworth, Guy, Sedalia  
 Townsend, A. M., Kenoma  
 Vandeventer, D. O., Sparta  
 Vanoy, L. T., Norwood  
 Vessells, F. M., Perryville  
 Vinyard, G. W., Jackson  
 Vitt, Rudolph S., St. Louis  
 Vogt, W. H., St. Louis  
 Vores, C. P., Unionville  
 Wade, E. E., Clever  
 Wade, J. H., Ponce de Leon  
 Wallis, J. R., Clinton  
 \*Warren, G. A., Black Rock, Ark.  
 Wasson, W. B., Nixa  
 Watson, R. H., Grandin  
 Welch, J. Franklin, Salisbury  
 Wells, Geo. D., Strafford  
 West, W. M., Monett  
 Weir, G. L., Greenfield  
 Wiles, W. T., Bakersfield



Williams, D. A., Niangua  
 Williams, J. W., Springfield  
 Williams, Robt. F., Springfield  
 Williams, N. C., Springfield  
 Willier, Albert Francis, Springfield  
 Wills, Wm. J., Springfield  
 Wills, R. L., Neosho  
 Witten, H. O., St. Joseph  
 Wittwer, Edward C., Mountain Grove  
 Woltzen, S. W., Clinton  
 Wood, N. P., Independence  
 Woodson, C. R., St. Joseph  
 Woody, C. E., Springfield  
 Wright, E. B., Pierce City  
 Young, J. C., Ozark  
 Zeinert, O. B., St. Louis

Total 324

### THE ANNUAL MEETING OF THE NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS

The thirteenth annual meeting of the National Association for the Study and Prevention of Tuberculosis and the twelfth meeting of the American Sanatorium Association occurred in Cincinnati May 9 to 11, 1917, under the presidency of Dr. Edward R. Baldwin of Saranac Lake, N. Y. The sessions were well attended by physicians and laymen alike who are interested in this question. The Clinical Section was presided over by Dr. Roger S. Morris of Cincinnati and the Pathological Section by Dr. Paul G. Woolley also of Cincinnati. The Sociological Section was held under the chairmanship of Mr. Frank H. Mann of New York.

The following papers were read in the Clinical Section:

The Nose in the Tuberculous, G. W. Wagner, M.D., Chicago.

Mouth Hygiene and Its Relation to the Tuberculous, Sidney Rauh, D.D.S.

Tuberculosis and Pregnancy, Stephen A. Douglass, M.D., Mt. Vernon, Ohio.

The Diagnosis and Surgical Treatment of Tuberculosis of the Bowel Developing in the Course of Pulmonary Tuberculosis, Edward Archibald, M.D., Montreal, Canada.

A Comparison Between the Skin Tests, Using Various Tuberculosis Antigens and the Complement Fixation Phenomenon, F. W. Wittich, M.D., Minneapolis.

The Wassermann Reaction and Pulmonary Tuberculosis, James S. Ford, M.D., Wallingford, Conn.

Tuberculosis Preventoria for Infants, Alfred F. Hess, M.D., New York.

Medical Aspects of the Michigan Tuberculosis Survey, V. C. Vaughan, Jr., M.D., Detroit.

The Etiology, Pathology and Treatment of Tuberculous Abscesses of the Chest Wall, Samuel Robinson, M.D., Rochester, Minn.

The Primary and Secondary Lobules of the Lung and Their Relation to Tuberculosis, W. S. Miller, M.D., Madison, Wis.

The Roentgen-Ray Study of the Lungs in Tuberculosis, H. Kennon Dunham, M.D., Cincinnati.

The Interpretation of Pathology Visualized by the Roentgen Examination of the Chest, L. G. Cole, M.D., New York.

Diaphragmatic Pleurisy (with lantern slides), Gerald B. Webb, M.D., Colorado Springs, Colo.

Are State Sanatoria Worth While? A study of present conditions and earning capacity of 1,056 patients discharged from Massachusetts Sanatoria during the years of 1912 to 1914, Miss Bernice W. Billings and John B. Hawes, II, M.D., Boston.

Prognosis in Tuberculosis from the Standpoint of the Occurrence of Hemoptysis and Tubercle Bacilli in the Sputum, Fred H. Heise, M.D., Saranac Lake, N. Y.

Localized Pulmonic and Miliary Tuberculosis, A. H. Garvin, M.D., Ray Brook, N. Y.

Deductions from Four and One-Half Years' Use of Pneumothorax in Pulmonary Tuberculosis, Charles L. Minor, M.D., Asheville, N. C.

Undergraduates' Instructions in Tuberculosis, Allen K. Krause, M.D., Baltimore.

Seasonal Variations in the Weight Curve, Karl Schaffle, M.D., Harrisburg, Pa.

A Definite Relation Between Inflammatory Conditions of the Postnasal Sinuses with Cough and Signs Over the Lungs, Walter Fischel, M.D., St. Louis.

The following program was given by the Pathological Section:

Unsolved Problems in the Pathology of Tuberculosis, H. E. Robertson, M.D., Minneapolis.

Gold Therapy in Tuberculosis, Lydia M. DeWitt, M.D., Chicago.

Chronic Pulmonary Leptothricosis, Stanhope Bayne-Jones, M.D., and H. C. Schmeisser, M.D., Baltimore.

Experimental Liver Tuberculosis, W. B. Soper, M.D., Saranac Lake, N. Y.

The Correlation of Certain Sputum Findings with Clinical Symptoms in Tuberculosis, J. E. Pottenger, M.D., Monrovia, Calif.

The Destruction of Tubercle Bacilli in the Sewage from Tuberculosis Sanatoria, A. T. Laird, M.D., Duluth, Minn.

The Reaction of Guinea Pigs to Measured Doses of Tubercle Bacilli, together with some remarks on the clinical treatment of tuberculosis in the guinea-pig, Paul A. Lewis, M.D., Philadelphia.

The Influence of Hypersensitive Tissue Reactions on the Pathology and Symptomatology of Tuberculosis, Allen K. Krause, M.D., Baltimore.

The Reaction of the Local Tubercle; a method for determining the value of indirect therapeutic agents in tuberculosis, H. J. Corper, M.D., Chicago.

The Pleural Reaction to Inoculation with Tubercle Bacilli in Vaccinated and Normal Guinea-Pigs, Robt. C. Paterson, M.D., Saranac Lake, N. Y.

The Wassermann and Luetin Reactions in Tuberculosis, H. J. Corper, M.D., W. A. Gekler, M.D., and H. Sweany, M.D., Chicago.

Models and Charts Illustrating the Topography of the Tubercle in the Lung, W. S. Mille, M.D., Madison, Wis.

The Cone and Collateral Circulation in New York City Tuberculosis, H. Kennon Dunham, M.D., Cincinnati.

Fatal Bilateral Spontaneous, Non-Tuberculous Pneumothorax, Necropsy, Alfred Meyer, M.D., New York.

The American Sanatorium Association held a brief scientific session and were addressed first by Dr. Charles F. Rockhill of Cincinnati on the subject of "The Private Sanatorium and Its Mission in the Fight Against Tuberculosis."

Dr. H. Kennon Dunham of Cincinnati gave "A Study of Lung Pathology in the Light of Differences of Density." Dr. Dunham's work was shown in St. Louis recently by him before the St. Louis Medical Society. It is a very careful and extremely interesting roentgenologic study of lung localization which Dr. Dunham demonstrated by means of several very ingenious lighting arrangements. He has gone far in this department and certainly it ought to be of material assistance in the handling of these cases.

Dr. Lawrason Brown and Mr. S. A. Petroff of the Trudeau Sanatorium at Saranac, the former the eminent clinical authority, the latter the director of the laboratory department, gave an interesting review of

their ideas on the complement fixation blood test for tuberculosis. In the light of the numerous contributions to the literature that are now before the profession, certainly the words of two such experienced and scientific workers deserve extended mention. Briefly, they state in most conservative terms the result of their experiences in this line. Ever since the announcement of Besredka of the Pasteur Institute of Paris of his success with the antigen which he perfected several years ago, much interest has been renewed in this subject. Craig of the army has announced his success using his particular antigen (alcoholic); Bronfenbrenner has succeeded very well with his lipid tubercular antigen; Miller and Zinsser of Columbia University, New York, have used with great success sodium chlorid suspensions of the various strains of tubercle bacilli. Now comes Petroff with an enormous experience with his usage of antigen made in various ways, by extraction with caustic soda, by alcoholic extractions also, etc. His results show that the test is positive in very early cases of tuberculosis and will surely be of assistance to the clinician in summing up his diagnosis. The reaction is eminently specific and deserves a place in the serologist's list of accepted laboratory tests. For fuller details of Petroff's latest technic, the reader is referred to his article in the first number of the recently issued *American Review of Tuberculosis*.

A very interesting paper was that by Archibald on the diagnosis and surgical treatment of tuberculosis of the bowel developing in the course of pulmonary tuberculosis. This is a most unusual contribution to the literature and serves but to indicate how carefully this disease is being considered, even from the surgical standpoint. While there must necessarily exist some doubt as to the possibility of determination of actual bowel lesions in these persons, and secondly, while there may be debatable ground concerning the performance of laparotomies on such people, still Dr. Archibald's figures are interesting and should command the respect of other surgeons and phthisiologists. Space forbids a complete review of all the excellent papers.

Attention of course must be called to the discussion on "A War Tuberculosis Program for the Nation," which was introduced by the State Commissioner of Health of New York, Dr. Herman M. Biggs. We are familiar with the account of the ravages of tuberculosis among the French troops more particularly in the world's war now going on. It is comforting to know that the government has at its command men like Biggs, Lawrason Brown, Baldwin and others, who can surely take the proper steps to combat the disease and prevent its spread among our own troops who will shortly be engaged in European trench warfare. This committee will make every effort to cut down the prevalence of the disease in American troops.

R. B. H. G.

## ST. LOUIS MEDICAL SOCIETY

### Meeting of May 19, 1917

The meeting was called to order at 8:40 p. m., Dr. Albert H. Hamel presiding. The minutes of May 12 were read and approved.

Dr. William H. Luedde moved that the courtesies of the society be extended to Dr. Hayward G. Thomas, Professor of Ophthalmology, Otology and Laryngology at the Oakland (Calif.) College of Medicine and Surgery. Carried.

The scientific program consisted of the following:

"The Polygraph in Certain Cardiac Disturbances," by Dr. George Richter.

"The Electrocardiogram in Certain Cardiac Disturbances," by Dr. G. Canby Robinson.

"Blood Pressure in the Diagnosis of Heart Disease," by Dr. Albert E. Taussig.

Discussion by Dr. Louis H. Behrens; Dr. Taussig closing.

The chair announced the election of Dr. Robert E. Schluter to the presidency of the Missouri State Medical Association.

Dr. R. Emmet Kane moved that the Program and Entertainment Committees be authorized to arrange an open meeting to be tendered the new president of the state association. Carried.

A letter from Col. Thomas U. Raymond, chairman of the Auxiliary Medical Defense Committee, was ordered tabled.

A letter from the Medical Committee of the Chamber of Commerce relative to the adoption of resolutions in the support of the two billion dollar government bond issue was read.

Dr. Edward P. Buddy moved that the Bartscher Fund Committee be instructed to invest all available money in liberty bonds. Carried unanimously.

Dr. Kane moved that a special committee of five be appointed to wait on the prosecuting attorney to demand the fullest investigation into the murder of Dr. Frederick L. Pohlmann and to urge a vigorous prosecution on a charge of first degree murder and of carrying concealed weapons and that the committee be instructed to report at the next meeting of the society.

Carried unanimously.

The chair appointed Drs. Kane, Sharpe, Aufderheide, Behrens and Seabold to constitute this committee.

The chair announced the death of Dr. I. G. W. Steedman, an honor member of the society.

Attendance 116.

### Meeting of May 26, 1917

The meeting was called to order at 8:45 p. m., by Dr. Albert H. Hamel. The minutes of May 19 were read and approved.

The scientific program consisted of a paper on "The Complement Fixation Test for Tuberculosis and the Wassermann Test in Pulmonary Tuberculosis," by Drs. George Ives and Jacob J. Singer.

Discussion by Drs. Edward P. Buddy, John L. Tierney, Selig Simon, Louis C. Boisliniere, George Dock and R. B. H. Gradwohl; Drs. Singer and Ives closing.

Dr. Norvelle Wallace Sharpe introduced the following resolutions which were unanimously adopted:

### DR. FREDERICK L. POHLMANN

Frederick L. Pohlmann, member of the St. Louis Medical Society, member of the Missouri State Medical Association, Fellow of the American Medical Association, good sportsman, loyal friend, upright citizen—while engaged in the performance of professional duties was murdered May 14, 1917.

That he but did his duty in having enunciated an opinion, based on the study of evidence, offered no compelling restraint to the secretly armed assassin who sought conference with him. Nor did the sanctity of consultation room, the sterling reputation of the victim, nor the gross knavery of attacking an unarmed man, check the murderous purpose.

And yet again is it permitted that we critically observe the ethical standard of a man who conceives his "place in the sun" to have been somewhat unduly shadowed;—malignant passion rapidly brings to foul fruition malignant deed—and Belgium violate is but



the prototype of the desolated hearth of Pohlmann—its master slain.

In the light of the foregoing the St. Louis Medical Society records its hot indignation and its profound sense of outrage that an honored member, in full and vigorous manhood, should thus be foully done to death; and it is herewith

*Resolved*, That the St. Louis Medical Society memorialize the prosecuting attorney of the city of St. Louis that no time be lost nor lawful means neglected to bring to retributive justice this carrier of concealed weapons, this assassin of unarmed men; and be it further

*Resolved*, That the Missouri State Medical Association and the American Medical Association be invited, and herewith are, to cooperate in all lawful endeavor that justice be speedily accomplished.

Dr. R. Emmet Kane reported that urgent work prevented the prosecuting attorney from meeting with the committee appointed to demand an investigation into the death of Dr. Pohlmann.

Attendance 108.

J. ALBERT SEABOLD, M.D., Secretary.

#### BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society met in regular session Thursday afternoon, May 31, 1917, in the court room at Butler, Mo.

The meeting was called to order by the vice president, Dr. T. C. Boulware, at 2 o'clock p. m. The storm of the night before kept many away, only six members being present.

The time was spent in reporting cases, every one present reporting from one to three interesting cases, and all were freely discussed.

It was voted to hold the next Tri-County Meeting on Thursday, July 26, 1917, at Butler. Some members wanted a banquet as was given last year, but by vote this was defeated.

It was moved and seconded that the Bates County Medical Society adopt resolutions to the effect that all doctors who go to the front with Red Cross units or with volunteer medical units will not be allowed to suffer financially by their sacrifice, but that their practice will be attended to by their brother physicians and that 35 per cent. of the fees collected from their patients for services rendered during their absence will be turned over to the families or representatives of the absent doctors while they are doing active duty at the front. The motion carried.

The meeting adjourned at 4:30 p. m.

J. S. NEWLON, M.D., Secretary.

#### CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met at the Snapp Hotel in Excelsior Springs, Monday evening, May 28, with an attendance of seventeen members and visitors.

Dr. W. A. Shelton of Kansas City read a very instructive paper on the elements which go to make up successful surgical treatment outside of the operation itself. He classified surgery into its ages of progress and said we are living in the physiological age at present.

The subheads of the paper were prevention of shock, the significance of pain, the anesthetic, and the mental poise of the operator. Salient points were thickly interspersed through Dr. Shelton's paper; some of these we note:

The dose of strychnia is more conducive to shock than a preventive.

Chloroform is a relic of the past. Ether is on the march to rear. General anesthesia is succumbing to the more modern regional method.

The morphin-scopolamin injection should precede the hour for operation, to induce a restful condition of the patient's nerves.

The best agent for regional anesthesia is novocain, with or without suprarenalin.

Local anesthesia is an incentive to a calm, untritable operator. It does away with operating against the speed limit. It absolutely abolishes shock.

This was one of the best papers of the year. A rising vote of thanks was tendered the doctor. Discussion followed by Drs. Sevier, Wallace, Remley, Rice and Gaines.

By invitation Dr. W. E. Keith read "Echoes and Impressions of the Mayo Clinic." Dr. Keith is a close observer and his paper was in keeping with his scientific discussions before the society. The magnitude of the Mayo brothers' institutions and the wonderful staff of workers, "all of whom are fiends for work," were brought to our very door by Dr. Keith. The doctor was impressed by the "mass of afflicted humanity, accompanied by some 57 varieties of relatives, which filled this resort of invalidism." Everything known to science is provided here, except the hour of sympathy. There is no time for the tear of regret. Precision is king.

Dr. J. E. Baird introduced a resolution concerning the care of our soldier-surgeon's interests while he is away in the army. This was passed unanimously and provides that one third of all fees derived from absentee's patients be paid to dependents or their agents.

A good meeting. You missed something, Dr. Absent Member.  
J. J. GAINES, M.D., Secretary.

#### LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The Lawrence-Stone County Medical Society met in regular session at Crane, Mo., Tuesday, June 5, 1917, in the office of Dr. H. L. Kerr at 10 a. m. The following members were present: Drs. F. S. Stevenson, R. C. Robertson, C. A. Moore, T. D. Miller, W. S. Loveland, S. A. Newman, T. T. O'Dell, J. P. Andrews, H. L. Kerr, R. W. Smart, L. Henson, J. H. Wade, J. R. Boyd and T. A. Coffelt.

Dr. W. S. Burney of Miller was elected to membership and Dr. S. A. Newman of Mt. Vernon was received by transfer from the Barry County Medical Society.

At 10:30 a. m. the society adjourned to the Presbyterian Church where was held an open meeting, and the following program was rendered:

Invocation.....	Rev. J. G. West
Welcome Address.....	Mr. O. F. Douglas
Response.....	Dr. C. A. Moore
Solo.....	Mr. Claud Craig
Address.....	Dr. T. A. Coffelt

#### DINNER

Vocal Selection.....	Miss Mildred Fete
Address.....	Dr. J. R. Boyd
Instrumental Selection.....	Mrs. Mae McCord
Reading.....	Mrs. Mae McCord

The society extended a vote of thanks to Drs. Smart and Kerr and the good people of Crane for their hospitality. The next meeting will be held at the State Sanatorium at Mt. Vernon, Tuesday, Sept. 4, 1917.  
R. C. ROBERTSON, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**PARRESINE.**—A mixture composed of paraffin, 94 to 96 per cent.; gum elemi, 0.20 to 0.25 per cent.; Japan wax, 0.40 to 0.50 per cent.; asphalt, 0.20 to 0.25 per cent., and eucalyptol, 2 per cent. Parresine acts mechanically. It is used in the treatment of burns, "frostbite," "chilblains" and for covering denuded surfaces. For use parresine is melted and applied while liquid by means of an atomizer or brush. The Abbott Laboratories, Chicago (*Jour. A. M. A.*, May 12, 1917, p. 1406).

**SIOMINE.**—Hexamethylenamine tetraiodide, containing 78.5 per cent. iodine. Siomine is decomposed in the intestine with formation of hexamethylenamine and iodide. It produces the effects of ordinary iodides, from which it differs only in that, being insoluble in water, it may be administered in solid form. It is marketed in the form of Simonine Capsules containing, respectively,  $\frac{1}{4}$ ,  $\frac{1}{2}$ , 1, 2 and 5 grains of siomine. Howard Holt Co., Cedar Rapids, Iowa (*Jour. A. M. A.*, May 12, 1917, p. 1406).

**STERILE AMPULES OF MERCURY SALICYLATE,  $1\frac{1}{2}$  GRAINS.**—1 Cc. of suspension containing  $1\frac{1}{2}$  grains mercuric salicylate in a fatty vehicle solid at ordinary temperature. Each ampule contains more than 1 Cc.

**STERILE AMPULES OF MERCURY SALICYLATE, 2 GRAINS.**—Each 1 Cc. of suspension contains 2 grains of mercuric salicylate in a fatty vehicle solid at ordinary temperature. Each ampule contains more than 1 Cc. of suspension. Hynson, Westcott and Dunning, Baltimore (*Jour. A. M. A.*, May 12, 1917, p. 1407).

**DIARSENOL.**—A proprietary brand of arsenophenolamine hydrochloride, chemically identical with salvarsan. For a discussion of the action, uses, chemical and physical properties see New and Nonofficial Remedies, 1917, under salvarsan. Diarsenol is marketed in hermetically sealed ampules containing, respectively, 0.1 Gm., 0.2 Gm., 0.3 Gm., 0.4 Gm., 0.5 Gm., 0.6 Gm., 1 Gm., 2 Gm. and 3 Gm. diarsenol. The Council accepted diarsenol for New and Nonofficial Remedies as the available supply of salvarsan appeared to be insufficient to supply the demand, and this preparation conforms to the rules of the Council for acceptance of proprietary preparations. Diarsenol is made in Canada by the Synthetic Drug Company under a license issued by the Commissioner of Patents of Canada. The Farbwerke-Hoechst Company, however, announces that the sale of brands of arsenophenolamine hydrochloride other than that sold as salvarsan is, in its opinion, an infringement of its rights. The company states that all violations of these rights will be prosecuted under the law (*Jour. A. M. A.*, May 12, 1917, p. 1407).

**SOFOS.**—A mixture of sodium dihydrogen phosphate and sodium hydrogen carbonate rendered stable by coating the particles of one of the constituents with disodium hydrogen phosphate. One part of sofos has the same phosphate value as 1.75 parts sodium phosphate U. S. P. When sofos is treated with water, sodium phosphate ( $\text{Na}_2\text{HPO}_4$ ) is formed and carbon dioxide is set free. Sofos has the physiologic action of sodium phosphate. It is claimed to have an advantage over the effervescent sodium phosphate preparations in that it is free from citrate or tartrate. The General Chemical Co., New York City (*Jour. A. M. A.*, May, 26, 1917, p. 1551).

### PROPAGANDA FOR REFORM

**PREPARATIONS OF THE PITUITARY GLAND.**—The last edition of the Pharmacopeia, recognizing that the best attested field of usefulness for pituitary extracts is in obstetrics, adopted the test of their activity on the uterus of the guinea-pig according to the method of G. B. Roth of the U. S. Hygienic Laboratory. Roth now reports on the activity of seven commercial samples, the products of five American firms. Four of the samples were found of Pharmacopeia strength; the other three were much weaker. Those preparations which have been accepted by the Council on Pharmacy and Chemistry for New and Nonofficial Remedies corresponded to the pharmacopeial requirements. Roth's work shows that the blood pressure method for determining the activity of pituitary preparations is not a satisfactory method for determining the activity of a preparation on the uterus (*Jour. A. M. A.*, May 5, 1917, p. 1325).

**WHEELER'S TISSUE PHOSPHATES.**—This is advertised as a "nerve food" and a "nutritive tonic." L. E. Warren of the A. M. A. Chemical Laboratory has analyzed this semi-secret proprietary and reports that it is a mildly bitter, flavored syrup which contains nearly 12 per cent. of alcohol, small quantities each of calcium phosphate and hydrochloric acid and insignificant quantities of iron and quinin salts. From the analysis it is evident that Wheeler's Tissue Phosphate is an unscientific, shotgun mixture whose most active and powerful constituent is the alcohol which it contains (*Jour. A. M. A.*, May 5, 1917, p. 1337).

**FROSTILLA.**—The lotion for chapped hands is, according to the *Druggists' Circular*, a quince seed mucilage containing alcohol, glycerin and perfume (*Jour. A. M. A.*, May 5, 1917, p. 1341).

**DATING OF BIOLOGIC PRODUCTS.**—William H. Park, Director, Bureau of Laboratories, Department of Health, City of New York, endorses the recently adopted requirements of the Council on Pharmacy and Chemistry that biologic products to be acceptable for New and Nonofficial Remedies must bear a statement of their date of manufacture. He believes that these requirements might well be made more specific and stringent. The rules of the New York Health Department governing the distribution of biologic products are: 1. The label on all bacterial vaccines must state the date the suspensions are made, standardized and killed. 2. The label on all serums other than antitoxin shall state the date of bleeding. 3. The label on antitoxins shall give the date when the preparation was last tested. 4. The label on vaccine virus shall have the date when the virus was last tested. Dr. Park states that there is no intention of extending the potency date of bacterial vaccines (four months) or of serums (nine months) other than the antitoxins until there are very specific data on which to act. For vaccine virus 100 per cent. of "takes" is demanded (*Jour. A. M. A.*, May 12, 1917, p. 1428).

**SALVARSAN IN TABES WITH OPTIC ATROPHY.**—Some assert that salvarsan occasionally produces optic atrophy; others with extensive experience believe that it has no injurious effect on the eye. If given at all, it should be administered early in the disease (*Jour. A. M. A.*, May 12, 1917, p. 1430).

**K-Y LUBRICATING JELLY.**—The composition of this proprietary has not been divulged. Probably a simple tragacanth jelly will produce the same effects as this proprietary preparation. At the German Hospital, Philadelphia, a jelly made from tragacanth, 3 gm., glycerin, 25 c.c., phenol, 1.5 gm., with water to make 300 c.c. has been used for years (*Jour. A. M. A.*, May 12, 1917, p. 1430).

**MORE MISBRANDED NOSTRUMS.**—The following "patent" medicines have been found to be marketed in contravention of the requirements of the U. S. Food



and Drugs Act, chiefly because the medical claims were found untrue: Whitehall's Megrimine, capsules containing acetanilid, caffeine and salol (in one instance also capsules containing antipyrine and capicum).—Brown's Blood Treatment, a liquid containing mercury and iodid.—Classe's Great Penetrating Liniment, an alcoholic solution of ammonia, chloroform, opium, camphor, oil of sassafras, oil of origanum and a thujone-containing oil.—Brown's "935" Injection (Formerly H. W.), a dilute solution of acetate and sulphate of zinc (*Jour. A. M. A.*, May 12, 1917, p. 1427-1428).

**BIOLOGIC THERAPY IN THE WAR.**—According to G. W. McCoy, Director Hygienic Laboratory, U. S. Public Health Service, there are five biologic products—vaccine virus, diphtheria antitoxin, tetanus antitoxin, antimeningococcus serum, and antityphoid vaccine—which may be regarded as indispensable in connection with conditions which prevail when large bodies of men are brought together. The firms manufacturing these products can, if need be, meet the demands of our own army and civilian population as well as those of our allies. McCoy believes that with the good sanitary conditions that may be expected to prevail in our concentration camps, the need for vaccine agents not thoroughly tried out, such as antidyentery serum, antipneumococcus serum, and vaccines against dysentery, cholera and epidemic meningitis, should not be extensive with the possible exception of the meningococcus vaccine (*Jour. A. M. A.*, May 12, 1917, p. 1413).

**EXAMINATION OF AMBRINE AND VARIOUS PARAFFINS.**—P. N. Leech of the A. M. A. Chemical Laboratory reports on the composition and properties of Ambrine and the various preparations proposed for the treatment of burns. He finds that the French proprietary Ambrine—exploited in the United States as Hyperthermine and Thermozone—is essentially paraffin in which a small amount of a fatty oil and asphalt is incorporated. A preparation similar in composition but superior to Ambrine in physical properties may be made by dissolving 3 to 5 drops asphalt varnish in 1.5 Cc. of olive oil and adding this to 97.5 Gm. melted paraffin melting at 47.2 C. It is probable that for most purposes simple paraffin will answer just as well as Ambrine or the mixtures proposed in its place. Whether used alone or in mixtures, the physical properties of the paraffin are most important. Paraffin U. S. P. will not answer, and hence the properties of many commercial brands of paraffin were determined and the best products are designated (*Jour. A. M. A.*, May 19, 1917, p. 1497).

**NUTROLACTIS AND GOAT'S RUE.**—Drugs which stimulate the secretion of milk are unknown to science. Yet the proprietary Nutrolactis (The Nutrolactis Company) is claimed to increase the milk supply of nursing mothers. Since dependence on a preparation of this kind is liable to cause neglect of the only means of increasing the milk supply of nursing mothers—care of the general health and a sufficient quantity of proper food—Prof. A. J. Carlson and Marion Lewis of the Hull Physiologic Laboratory of the University of Chicago studied this proprietary and the drug goat's rue (*Galega officinalis*), which the proprietors of Nutrolactis hint as being the potent constituent to determine their effects on nursing animals with the intention of extending the study to nursing mothers if the animal trials warranted this. The animal experiments showed that neither Nutrolactis nor goat's rue had any effect on the milk supply of nursing goats or dogs. The Council on Pharmacy and Chemistry, which had caused the study to be made, endorsed the work of Carlson and Lewis, and held that the claimed galactagogue effects of Nutrolactis and the drug goat's rue had not been substantiated (*Jour. A. M. A.*, May 26, 1917, p. 1570).

## BOOK REVIEWS

**IMPOTENCY, STERILITY AND ARTIFICIAL IMPREGNATION.** By Frank P. Davis, PhB., M.D., St. Louis. C. V. Mosby Company, 1917.

While this little book contains nothing new or startling it nevertheless covers the field of the normal and abnormal sexual life of males and females quite satisfactorily and represents all of the facts clearly and succinctly. W. C. G.

**DIAGNOSIS FROM OCULAR SYMPTOMS.** By Matthias Lanckton Foster, M.D., F.A.C.S., Member of the American Ophthalmological Society; Ophthalmic Surgeon to the New Rochelle Hospital; First Lieutenant in the Medical Reserve Corps, U. S. Army. New York. Rebman Co., 141 W. 36th St.

In reading Foster's work one is impressed by the succinct manner in which a difficult subject is handled. The book is very complete and embraces all modern methods of ocular diagnosis. Its chief fault is its bulkiness which the publisher can probably overcome in the next edition. Nevertheless it is a valuable addition to any medical library. F. O. S.

**CATARACT.** By W. A. Fisher, M.D., Professor of Ophthalmology, Chicago Ear, Nose and Throat College, Chicago. Published by the Chicago Ear, Nose and Throat College.

This interesting subject is well treated in the book before us which consists of something more than 100 pages. The author wastes no time or space in the discussion of the historical or academic phase but takes up almost from the first paragraph the more practical operative side of the subject. This naturally reduces the scope of the work. The book is unusually well supplied with excellent illustrations which amplify the text. H. S. H.

**A CHEMICAL SIGN OF LIFE.** By Shiro Tashiro, Instructor in Physiological Chemistry in the University of Chicago. The University of Chicago Press, Chicago. Price, \$1.00.

Material is considered in this neatly written, small volume, which might be expanded into a large, highly technical work. However, this has been avoided so that any medical man interested in the chemistry of life, even in an elementary way, should enjoy the book. Carbon dioxid is considered as the sign of life and indicates the degree of vital activities. The biometer, carefully described, is used for estimating carbon dioxid gas eliminated as a result of cellular activities. It is demonstrated that neural functions have a greater cellular elimination of the gas as compared with cells of all other organs. A. L. S.

**ANNALS OF SURGERY, MAY, 1917.** J. B. Lippincott Company, Philadelphia.

In this issue are contributions from members of the American Urological Association in memory of their deceased fellow, Dr. Paul Monroe Pilcher. There is a handsome portrait of Dr. Pilcher as a frontispiece.

The scientific contributions are up to the high standard established by this publication. Among the papers is one by Dr. J. R. Caulk of St. Louis, on "Preliminary Renal Drainage with Special Reference to the Two-Stage Operation on the Kidney," and one by Drs. Henry J. Scherck and R. B. H. Gradwohl of St. Louis on "The Surgical Significance of the Estimation of the Non-Protein Nitrogenous Constituents of Blood."

**DISEASES OF CHILDREN.** By George M. Tuttle, M.D., and Phelps G. Hurford, M.D. Lea and Febiger, Philadelphia and New York.

All the important literature relating to the subject that has appeared during the past ten years has been carefully reviewed, and the deductions therefrom, checked and rechecked by personal experience, have been amalgamated with the earlier text in the construction of the new chapters. The authors hope that the volume in its new form will be found to merit all of its past popularity, and that it may win many new friends, among both students and practitioners.

The library of the St. Louis Medical Society is under obligation to writers of the book for the donation of an authors' copy. W. C. G.

**LOCALIZATION AND EXTRACTION OF PROJECTILES.** Par L. Ombredanne et R. Ledoux-Lebard. Masson et Cie, Editerus, 120, Boulevard Saint-Germain, Paris, VI, 1917.

This book is distinctly a product of the great war. While in time of peace the extraction of projectiles is an extremely rare procedure even in the larger hospitals, the present strife has made it a very common occurrence. The surgeons of Europe have had time enough to develop and perfect their technic to a considerable extent so that it has now attained almost mathematical precision.

The authors have given us a fairly exhaustive treatise on the subject, as viewed from the standpoint of the French surgeon. They have described the various radiological appliances used in France, as well as the special instruments used in their own work. The illustrations and description of the operating room arranged for removing foreign bodies under aseptic conditions before a Roentgen ray apparatus are of considerable interest to us at the time of our entrance into the conflict.

On the whole this monograph is extremely practical, the ultra-scientific phases having been entirely omitted. There is a short table of contents but no index. R. E. S.

**TRAUMATIC SURGERY.** By John J. Moorhead, M.D., F.A.C.S. Adjunct Professor of Surgery in the New York Post-Graduate School and Hospital. Octavo volume of 760 pages, with 522 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$6.50 net. Half Morocco, \$8.00 net.

One is somewhat startled at the title of this book. One finds on perusal, however, that it does not treat of traumatic surgery but deals in a very comprehensive way with the surgery of accidental injuries and the conditions resulting therefrom. How very broad the book is, becomes at once apparent when one notes that such subjects as mammary abscesses, abortion, keloids, etc., are discussed. The chief criticism in fact may be based on this very breadth of scope for this compels a sketchy treatment of many of the topics and produces even with this brevity a very large book. Nevertheless the main subjects are handled in a very satisfactory way and since the book will appeal largely to men in the vigor of youth its size need not be a deterrent factor.

Nearly half of the book deals with fractures and dislocations and as such is rather a duplication of books on these special subjects. It is in the sections on injuries of the head and spine that the book finds its real worth. The section dealing with neuroses following trauma also is praiseworthy.

On the whole the book can safely be recommended, particularly to the general practitioner and intern, as one calculated to enhance the efficiency of their work. A. E. H.

**ASTHMA: PRESENTING AN EXPOSITION OF THE NON-PASSIVE EXPIRATION THEORY.** By Orville Harry Brown, A.B., M.D., Ph.D., Formerly Assistant Professor of Medicine, St. Louis University. Thirty-six engravings. St. Louis: C. V. Mosby Company, 1917.

The conditions included in the term "asthma" might well excite efforts at general study, and Dr. O. H. Brown has earned the gratitude of the profession by presenting a comprehensive and up-to-date study of them. The writer has had the privilege of following Dr. Brown's research over some years and of reading his manuscript, and has been impressed by the accuracy of the author's clinical work and by the fullness and symmetry of the literary production. The literature, both monographic and special, is well presented, the theories of the disease are clearly set forth and critically discussed. The author's theory of asthma, named by him the "Nonpassive Expiration Theory," is stated clearly and in an admirable spirit. It would be superfluous to give an analysis of this theory here, since the chapter well repays careful study and bears directly on the author's method of treatment, which is clearly presented and reveals the well-informed, accurate and conscientious therapist. The student and the practitioner can find in this book a true picture of the previous speculations and present knowledge of asthma expressed clearly and concisely, a trustworthy guide in the examination and treatment of actual patients, and many suggestions for fresh explorations by the bedside and in the laboratory. G. D.

**THE INTERNAL SECRETIONS, THEIR PHYSIOLOGY AND APPLICATION TO PATHOLOGY.** By E. Gley, M.D., Member of the Academy of Medicine of Paris; Professor of Physiology in the College of France, etc. Translated from the French and edited by Maurice Fishberg, M.D., Clinical Professor of Medicine, New York University and Bellevue Hospital Medical College, Attending Physician, Montefiore Home and Hospital for Chronic Diseases. Authorized translation. New York: Paul B. Hoeber, 1917. Price, \$2.00. Pages, 241.

This little book supplies a grave need in the field of the literature of internal secretions. After dealing somewhat with the history of the studies of Claude Bernard and Brown-Sequard and others, he treats the subject from a physiologic and pathologic standpoint in a critical, scientific and progressive spirit.

His discussion of tachyphylaxia is very interesting, especially as it is associated with a discussion of the administration of various conglomerations of glandular products. Gley makes what is probably an indispensable distinction between the two entirely different characteristic products of internal secretion when he points out that one is a nutritive substance while the other is purely morphogenetic. The author opens a broad field for further research when he suggests that we be guided more by the physiological activity of the substances found in the veins of a gland supposed to have an internal secretion; he has observed that after removing the gland and the animal has passed into a pathologic state, the feeding of the glands should relieve this pathologic state and place the animal in its former state of good health.

The various known functions of the endocrine system are briefly considered together with the supposed actions of the secretions from the various endocrine glands. To the ultra-enthusiast the book will not appeal, but to the unbiased scientific student it represents a condensation of the positively known and the various suspected physiology, and to some extent the clinical symptomatology of the glands of internal secretions. It is a valuable addition to the library of any physician. J. C. L.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee  
ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

AUGUST, 1917

Number 8

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION COMMITTEE { W. H. BREUER, M.D., Chairman  
S. P. CHILD, M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### CYSTOSCOPIC EXAMINATION OF THE BLADDER IN THE PSYCHOSES \*

FRANCIS M. BARNES, JR., M.D.

Associate in Psychiatry, Washington University, and Visiting  
Psychiatrist, St. Louis City Sanitarium

AND

JOHN R. CAULK, M.D.

Chief of Clinic, Genito-Urinary Department, Washington  
University, St. Louis

ST. LOUIS

It has been observed by one of us (Caulk) that the cystoscopic findings in certain diseases of the central nervous system, particularly those affecting the lower segments of the spinal cord, of which class tabes dorsalis is a most notable example, are definite, constant and characteristic to a degree which makes them of a very considerable diagnostic importance.

As such a large percentage of diseases of the central nervous system have as their initial symptom disturbances of bladder function, and as so many surgical diseases associated with bladder disturbances (we refer particularly to prostatic obstruction) are either complicated by or associated with tabes, it is apparent how extremely important should be the recognition of this type of bladder. This bladder picture under reference has been commonly designated as the "tabetic bladder," evidently because it was supposed to be representative solely of tabes. Such, however, is not the case, as it is found in several other diseased conditions of the central nervous system, and in individuals who have as yet been pronounced neurologically normal. Therefore the term "tabetic bladder" seems a faulty one. We feel convinced, however, that this picture is strikingly suggestive of neurological disease, even though in many cases the findings have not been confirmed by neurologists. On this account, in an analytical study of 117 cases previously published they

were grouped into two classes in order to compare the findings: those which had been neurologically confirmed as having definite central nervous system disease; and those which had not been so confirmed.

Before entering into the comparative study of these cases it seems most desirable at this point to give a brief description of the cystoscopic picture which we have under consideration. The most constant and striking finding is the appearance of the internal sphincter. With the cystoscope in its normal horizontal position, there is a feeling of relaxation which one does not get in normal cases. On observing the sphincter margin, it has been found to be without striking appearance above and laterally, but as one approaches the floor it is observed that immediately the striae of the floor of the urethra can easily be seen external to the sphincter. On depressing the eyepiece of the cystoscope and withdrawing the instrument the posterior urethral floor or the supramontane urethra may be inspected, showing its folds, the guttered appearance of the urethra, and the urethral walls. Very frequently the scope may be withdrawn and the verumontanum brought plainly into view, the orifices of the utricle and ejaculatory ducts may be inspected. This, of course, cannot be done in the normal urethra, for the reason that, with normal tone, the musculature clamps so closely to the lens that inspection of the urethra is impossible. Such urethras are usually very insensitive and seldom require local anesthesia for examination. Associated with this orifice picture, the trigone is usually elevated, but seldom husky and hypertrophic, as behind mechanical obstructions; the interuretic bar is usually lifted and thin. Laterally the trigone at its tips frequently fans out into trabeculae, which spread out over the lateral walls of the bladder. The ureteral orifices have shown nothing in particular, except that in some cases they have been sluggish in their ejaculation of urine. With this picture of relaxation at the internal orifice of the bladder there is usually bladder trabeculation which does not always show particular char-

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

acteristics, except that possibly it may be a little more delicate than trabeculation seen back of mechanical obstructions. Koll believes that it has a predilection for the lateral fornices and has a specific appearance, but our cases have not been so definite in this respect, as they have all been more or less generalized and have assumed various grades of trabeculation. The external vesical sphincter has been found spastic in 57 per cent. of the cases, 71 per cent. of this number being in tabetics. The bladder musculature was found weakened and in many instances very atonic in 53 per cent., and 82 per cent. of these were in tabetics. The Roentgen-ray findings of the bladder have been interesting. We have made cystograms with thorium, collargol and argyrol. These cystograms have shown usually a clean cut line below in the internal sphincter region; several of the very relaxed cases, however, have shown a funneling due to the material in the deep urethra, as has been observed also at the Johns Hopkins clinic. There has been one observation in particular, made in several recent cases, which has been of interest to us. If the bladder is filled with solution and a comparative plate is taken with the patient lying and then standing, there is noticed in tabetics a dropping down or sagging, with forward toppling of the bladder. This is probably due to the marked relaxation of the various bladder and prostatic supports, namely the ligaments and muscular supports in this region, and does not occur in normal individuals. This, we believe, is an observation which has not been previously demonstrated.

Of the 117 cases above mentioned, the diagnosis was made in the urological clinic in 46 per cent., and by the neurologist in 54 per cent.; 46 per cent. of the cases diagnosed by the cystoscope were confirmed by the neurologist and 54 per cent. were not. Of the 54 per cent. of unconfirmed cases, 6.2 per cent. were later confirmed, these being two spinal cord tumors and a case of paresis; the remaining 48 per cent. of the unconfirmed cases were associated with prostatitis, prostatic hypertrophy, bladder tumors, renal calculus, pyonephrosis, paralysis agitans and lead poisoning. It is this group which is of particular interest to us because the bladder picture and other associated diagnostic phenomena are as pronounced and definite here as they are in the confirmed tabetics.

Urinary symptoms, such as frequency and difficulty of urination, occurred in 95 per cent. of this series, being about 60 per cent. in tabetics and 40 per cent. in the unconfirmed. Incontinence of urine of the paradoxical type was present in 34 per cent. of the cases, and of this number two thirds were tabetics and one third unconfirmed. Disturbances of the sexual powers presented one of the most uniform findings. In diseases of the central nervous system, either complete loss or marked disturbance occurred

in 82 per cent. and in the unconfirmed cases about 50 per cent.

We have been impressed with the great number of uremics in this series. It has been our impression for a long time that the cases of tabes which showed the most improvement under treatment were those which were associated with uremia, the improvement in the uremic condition being largely responsible for the restoration of the patient's general health. We believe that our impression has been justifiable and will be confirmed by the findings in this group of cases. That is to say, that many of the symptoms and toxic conditions which are suffered by patients with tabes dorsalis are undoubtedly due to the uremia. We come to this conclusion because a number of patients who were extremely weak, pale and toxic, this condition having been attributed entirely to the disease of the nervous system, have wonderfully improved and in several instances been relieved entirely of symptoms by drainage and measures instituted to relieve the profound uremia. Forty-two per cent. were definitely uremic. Of this 42 per cent., 86 per cent. occurred in patients with confirmed central nervous system disease; 14 per cent. occurred in cases which were not neurologically confirmed. This shows a very high percentage of uremia in the definitely neurological cases. The smaller group of unconfirmed cases with uremia has been of interest. In one case there were the typical bladder picture, a negative Wassermann, a high residual urine, marked uremia with no evidence of a mechanical obstruction and death of uremia. It is possible that if we could have treated this patient earlier and spared him his renal injury he might have lived long enough to have shown evidence of nervous system disease.

An almost constant finding associated with this cystoscopic bladder picture was the relaxation of the rectal sphincter. The relaxation occurred in 90 per cent. of the cases in this series, about an equal proportion being found in the neurologically confirmed and unconfirmed cases.

In view of the fact that a number of the neurologically unconfirmed group of cases presented a bladder picture similar to that found in cases with definite organic disease of the spinal cord, we were exceedingly anxious to study a second group of neurological cases in which the disorder of the central nervous system presented itself primarily by symptoms largely mental in character, the disease being cerebral rather than spinal, and dependent on or associated with organic changes in the central nervous system in some instances, or purely functional in others. In other words, we wished to investigate and study cystoscopically the bladder condition as found in individuals suffering with various types of psychoses. Among other reasons why we thought a study



of the bladder in mental cases might reveal findings of interest and importance, was the fact that in the previously mentioned study of neurologically unconfirmed cases where this bladder picture was found 6.2 per cent. of these under our observation later developed definite neurological disease of the central nervous system, and still more striking was the fact that among these cases which subsequently proved to be distinctly neurological was found a case of paresis. Furthermore, as in certain groups of psychoses, there has been considerable disagreement of opinion as to whether the mental disorder was purely functional or was dependent on organic changes in the brain, it seemed possible that a study of the bladder might offer another diagnostic feature which might aid in reaching the answer to this question. One point which should not be overlooked is that organic disease of the nervous system may be present in individuals with mental disorder, but that the two are entirely independent, that is, coincidental rather than causal.

In carrying out this work we have been extremely cautious that the cystoscopic examinations were made without any prejudice on the part of the operator, by concealing from him any knowledge of the character of the case on which he was working. To this end, the cases were selected and examined neurologically entirely independently of the cystoscopic work<sup>1</sup>. In order that our series might be gathered with as little loss of time as possible and where the cases might be thoroughly worked up and under continuous observation, we have been glad to take advantage of the abundant material provided at the St. Louis City Sanitarium.

In this second series, dealing exclusively with mental disorders, we have to report the analytical study of 188 cases, 158 male and 30 female. This group comprises 80 cases of paresis, 2 cases of tabes dorsalis with psychosis (not taboparesis), 9 cases of cerebral (spinal) syphilis, 13 cases of organic brain disease (not syphilitic), 11 cases of alcoholic psychosis, 11 cases of epilepsy with psychosis, 44 cases of dementia praecox, 6 cases of defective states with psychosis, and 12 cases of manic depressive insanity.

*Paresis.*—Eighty cases, 66 male and 14 female. Twenty-six had diminished or absent knee jerks, and may on this account be classified as the tabetic type of paresis. In 4 cases there is no record of the knee jerk; in the remaining 50 cases the knee jerks were present or exaggerated. Of this whole group of 80

cases, 40 (50 per cent.) showed a typical positive cystoscopic picture. Of these 40 cystoscopically positive cases, 11 were females. Nineteen (38 per cent.) of the cases which had present or exaggerated knee jerks showed the typical positive cystoscopic picture. Of the 26 which had diminished or absent knee jerks, 19 (74 per cent.) showed the positive bladder findings. In comparing the neurological and urological findings, the cystoscope gave a positive picture in 38 per cent. of the cases in which the neurological examination did not indicate a lesion of the spinal cord of the tabetic type. On the other hand, the cystoscopic examination showed only 74 per cent. of positive urological findings in cases where the neurological examination revealed a definite lesion of the spinal cord of the tabetic type. In regard to the 38 per cent. of cases above mentioned, in which the cystoscope revealed positive bladder changes while the neurological examination failed to discover these, it should be stated that it is claimed that 99 per cent. of all paretics have pathologically demonstrable lesions of the posterior columns of the spinal cord such as are found in tabes dorsalis. It may be possible that, although these posterior column changes as found in all paretics may not be of sufficient intensity to produce clinical signs in more than 34 per cent. of the cases, as found in this series, they may be of sufficient intensity to give rise to the bladder changes revealed by the cystoscope and which we have designated as positive.

*Tabes Dorsalis with Psychosis (not Taboparesis).*—Two cases, both male, and both unquestionably positive cystoscopically.

*Cerebral (Spinal) Syphilis.*—Eleven cases, 1 female, 10 male. Of these, 5 (55.5 per cent.) showed positive cystoscopic findings. Four of these are distinctly hemiplegic and the fifth has unilaterally exaggerated tendon reflexes. We wish to call attention particularly to the almost invariable and uniformly positive bladder picture in hemiplegics, in this instance of syphilitic origin.

*Organic Brain Disease with Psychosis (not Syphilitic).*—Thirteen cases, 4 female and 9 male, including arteriosclerotic dementia, senile dementia, multiple sclerosis and Huntington's chorea. In this group were 3 (23 per cent.) positive cases, all being arteriosclerotic dementia. One case of multiple sclerosis is worthy of special note in that, although he had the typical orifice, there was no trabeculation. Otherwise, this case would have been considered positive, even though the urethra, though relaxed, was not so much so as in the typical tabetic case.

*Alcoholic Psychosis.*—Eleven cases, all male, including Korsakoff's syndrome, alcoholic dementia and chronic alcoholism. Of this group

1. We wish to take this occasion to express our gratitude and thanks to the Superintendent and Staff of the St. Louis City Sanitarium for the hearty cooperation in the conduction of this work. We wish particularly to acknowledge our indebtedness to Dr. James Lewald, Assistant Superintendent at the Sanitarium, and to Dr. H. G. Greditzer, Assistant Surgeon to Out-Patients, Genito-Urinary Department, Washington University Dispensary, for their assistance in the study.

one case (9 per cent.) showed positive bladder findings, and in this, a case of Korsakoff's dementia, it is interesting that the knee jerks were absent, although there were no other signs of neuritis. These absent knee jerks may indicate a spinal cord involvement, although there were no other evidences of tabes, and thus explain the positive bladder findings. A second case of Korsakoff's is interesting because, for some time, he had been looked on as a case of tabes dorsalis. The knee jerks in this case are absent. In this case, as well as the preceding one, serological examination of the blood and spinal fluid was negative. This second case cystoscopically showed positive findings with the exception of an invisible verumontanum. The interest is that neurologically the case was uncertain for some years and cystoscopically, though classed as negative, is really doubtful and highly suggestive.

*Epilepsy with Psychosis.*—Eleven cases, male, 3 (27 per cent.) with positive bladder findings. In 2 of these positive cases it was noticed that there was a backflow of semen into the bladder.

*Dementia Praecox.*—Forty-four cases, 36 male, 8 female. Of these, 10 (22 per cent.), 1 female and 9 male, gave positive urological findings. Of these cases, 1, associated with alcoholism, is interesting because positive in view of the fact that at the time of his admission his condition was such that a diagnosis of paresis was made, later observation not confirming this. Although we know that this type of psychosis is frequently negativistic and retains urine and other excretions to a dangerous degree, it is striking that 16 of the 44 cases had no residual urine, 17, 90 c.c. or less and only 5 more than 250 c.c. In several of this group there was noted a backflow of semen into the bladder. In one case, although the urethra was very relaxed and anesthetic, the walls could not be inspected. The percentage of positive cases in this group, or more than one fifth, seems high, but we must remember in this connection that there are those who argue for the organic basis of dementia praecox.

*Defective States and Toxic Psychoses.*—Six cases, 5 male, 1 female. One (16.6 per cent.) with positive bladder findings, this being a case of imbecility following a severe meningitis in infancy.

*Manic Depressive Insanity.*—Twelve cases, 10 male, 2 female. One (8.3 per cent.) with positive bladder findings. The positive case was a female, aged 55, with a sagging bladder which could easily account for the trabeculation on which the positive diagnosis largely rested, and which more possibly should be considered at least doubtful, if not negative.

In this series of 188 psychoses the neurological findings were such as to lead to the ex-

pectation of a positive bladder picture in 23 per cent., whereas this positive picture was found in 54 per cent. If we separate these cases into organic and functional groups, however, we find that the neurological and urological findings check fairly closely so far as the organic group is concerned. In other words, the cystoscope reveals positive bladder findings in a much larger proportion of the functional cases than was to be expected.

The appreciation of this bladder picture bears an important surgical significance, as its recognition will often spare an unnecessary operation and lessened postoperative incontinence.

We believe that the results of our work quite definitely indicate that the cystoscope has an important field in the differentiation of functional from organic diseases of the central nervous system.

Humboldt Building.

#### DISCUSSION

DR. JULIUS FRISCHER, Kansas City: The point brought out by Dr. Caulk of uremia in tabetics and paretics is a very good one and I was very glad to hear it emphasized. The fatal results in these cases of tabes and paresis are due to the increased toxicity following reabsorption of urinary products.

DR. JOHN R. CAULK, St. Louis, closing: Many of the tabetic findings were abbreviated in this paper, having been published in a paper a short time ago, so I did not go into the matter of the early symptoms. As a matter of fact, about 50 per cent. of the patients consulted the urological clinic first on account of bladder symptoms, no other symptoms being noted, and 50 per cent. of the group which were neurologically negative had these bladder changes, so it makes a pretty high percentage of symptoms and findings as an initial process.

With regard to pain, it is almost invariably found that these patients require no anesthetic at all, and cystoscopic examinations and operations cause very little inconvenience.

Residual urine is found in quite a percentage of tabetics. High residuals, sometimes as much as 1,500 c.c. have been found. Ninety to 100 c.c. is about the average that we have found for residual urine.

This work was stimulated particularly by surgical association of prostatic obstruction and tabes. There is so much talk about post operative incontinence of urine; we have found that incontinence of urine following prostatectomy tallied quite closely with the association of prostatic hypertrophy and tabes in this series.

Another thing that I wish to emphasize is the fact that the tabetic, no matter how high his residual urine may be, very frequently, in fact always greatly improved under drainage. It relieves the back pressure and allows the muscles to contract. These patients get so that by regular, systematic catheterization and dilatation of the anterior and posterior urethra and by training them to empty the bladder at certain times they are able to look after their bladders remarkably well and keep them in pretty good condition. I saw only day before yesterday a man who two years ago had 120 c.c. of residual urine; today he has about one to three ounces, and I see him once in two or three weeks. Of course, we had him under treatment for a long time.

The work on psychoses has been particularly interesting, and I wish to thank Dr. Barnes very much for his kindness in allowing us the use of the City Sanitarium and his cooperation in this work.



**TRANSPLANTATION OF FAT, FASCIA, AND  
LIVING TISSUE IN SURGERY: A  
REPORT OF EXPERIENCES IN  
VARIOUS CONDITIONS\***

ALLEN B. KANAVEL, M.D.  
CHICAGO

In considering a subject that might have some scientific bearing and at the same time have a distinct clinical relation to the work that each of us does, it seemed to me that it might be worth while for me to bring to your attention a few of the various types of cases in which I have made free transplants of tissue. I am not presenting a complete résumé of any one of the individual types concerning which I shall make brief remarks, but will content myself with selecting individual cases which may serve to draw your attention to the subject as a whole.

The first group with which I propose to deal is the transplantation of free flaps of fascia and I will show you one or two of these as we have the slides. I have transplanted fascia in probably twenty cases. A large number of the cases of transplantation of free flaps of fascia have been in inguinal hernias. I have, however, transplanted fascia in other parts of the body; for instance, in such conditions as the restoration of Poupart's ligament in cases in which I have destroyed it incident to an operation for sarcoma, we will say, of that region. I have transplanted it for various defects about hollow viscera, as, for instance, the stomach. But, from a practical standpoint, in the experience which I have had, it would seem to me that the largest percentage of cases in which the transplantation of flaps of fascia would prove to be of value would be in that type wherein we transplant to locations where we have living tissue on both sides of the flaps.

It is true that sometimes we may transplant tissue into a defect of the stomach and have that flap live, or, at least, have a regeneration along that flap of the mucous membrane of the stomach. It is true that we may transplant it into defects of the urinary bladder; but I must say that in most of the cases in which I have resected portions of the bladder I have found it more practicable to decrease the size of the bladder, using the normal tissue of the bladder, than to use a transplant because of the well known property of the urinary bladder to dilate and carry on its functions successfully.

The greatest amount of satisfaction, therefore, is to be found in those cases in which we have hernias to restore and defects of that general nature. I have not had an opportunity to use the method in a defect of the diaphragm, but it seems to me that it might be possible since we have the stomach or the abdominal viscera on one side and the lung on the other.

Slide 1.—This first case is shown you because of the fact that the patient had had seven operations for a ventral hernia. During these various ministrations of the surgical profession she had lost the entire abdominal wall except the skin and the resulting scar tissue, from an inch below the ensiform to the symphysis. We dissected up the skin, the loose scar tissue underneath being removed, the tissue attached to the peritoneum being pushed inward. A defect existed in the central region some four inches in diameter, after all tissue had been brought as near the center as possible. Then I transplanted from the leg, from the fascia lata, a strip of fascia 5 to 5½ inches in length and 4 inches in width, covering a defect in the central portion of the abdomen 4½ inches in length and 3½ inches in width. In other words, the edges of this flap were covered on all side—by living muscular tissue on one side and on the other by living peritoneal tissue. The central part was lined on the inside by remains of peritoneal tissue and on the outside by the skin. These pictures were taken eight months after the operation. The woman is rather obese and I suppose you must take my word that there is no hernia shown at that time, and now, six months after the taking of the picture, the patient still presents an intact abdomen.

Slide 2.—Here is another type of case in which I have used flaps of fascia. This was a patient with a spina bifida. The sac was extremely large and it was difficult to cover the defect completely after dissecting out the sac. It was operated on ten days after delivery and there was not a marked paralysis in spite of the fact that the nerves ran through the dorsum of the sac. These were dissected out and the dura closed. The muscles were brought together as close as possible from the sides; but owing to the fact that the defect was extremely large it was difficult to make a muscular flap from both sides that would cover it completely. Therefore a flap was taken from the fascia lata of the mother's leg and sewed over the muscular line. The muscles were split laterally and an attempt made to close them in the middle line, but, as I say, they did not close satisfactorily. The flap was then sutured over the muscle and underneath the skin.

I am always very careful to tuck down the edges of the flap of fascia so that there is no rolling of the flap on itself. Also, I am careful to stop all the hemorrhage so that there is not an accumulation of blood. In those cases in which I remove the fascia from another individual, I am very careful also to see that the blood does not agglutinate.

Slide 3.—This illustrates a third case in which the flap of fascia was used to close a defect. This is an ordinary exstrophy of the bladder, and an ordinary Segond operation was done in this case, the bladder wall being turned down,

\* Delivered before the St. Louis Medical Society, Feb. 24, 1917, illustrated by stereopticon slides.

leaving the peritoneum in the center line showing through the defect of the abdominal wall. It was closed by the ordinary methods such as you are acquainted with, the Segond operation, and the next picture (Slide 4) shows the transplantation of a flap of fascia to cover in the defect of the abdominal wall. The bladder, of course, drained from down over the penis. A flap of fascia was taken from the boy's leg and drawn underneath the skin and over this defect, tacked at points and at the edge of the abdominal defect, and thus brought across the hernia. It was attached to Poupart's ligament on either side. As you know, practically all these cases have double inguinal hernia.

This serves also to illustrate the manner in which these inguinal hernias are attacked when we have a defect in the wall. You are aware of the fact that there are certain hernias in which there is not a satisfactory attachment of the conjoined tendon to the spines of the pubes. In these cases the conjoined tendon comes over and passes under the rectus muscle, leaving a defect of anywhere from a quarter of an inch to an inch or an inch and a half. This seems to happen—I suppose it is purely an accident in my experience—in individuals who are rather obese. Whether that is so or not, we do find this defect at the inner end of the attachment of the conjoined tendon so that, after we have done the ordinary Bassini or the Ferguson or the Coley operation, there is still an extremely weak point here. Now it is in this type of inguinal hernia that I have found the transplantation of a flap of fascia from the patient's leg of the most success. I have transplanted fascia in a number of cases in hernia of this particular type. I have not had a single flap of fascia cast off.

In this particular case that I show you an infection took place in the right hernial wound and I naturally expected my flap would be lost. To my surprise, however, the wound healed, the flap remained in position, and I saw the patient two years later, when no sign of return was present. Those of you who have had to deal with these cases realize the difficulty, the defect that had to be covered and that without a repair of the defect there would certainly have been a return.

Slide 5.—This is a picture of the individual taken two years after. The lateral view shows that there is no bulging at all through the defect in the wall.

Slide 6.—The transplantation of flaps of fascia in dural defects with fat is well known. I transplant fascia with the fat attached. Both these patients had traumatic epilepsy and I was in hopes that the operation might do some good. One patient had an extensive scar over the longitudinal sinus, involving the brain on either side. The other patient had a scar just in front

of the motor region. I transplanted the fat and the flap of fascia, and from a physical standpoint the transplantation was entirely successful. The flaps remained in position. We had no difficulty with the healing of the wound. The patients left the hospital without any epileptic attacks, and returned in four or five months both of them having just as much epilepsy as they had before they subjected themselves to my kind ministrations.

To come, now, to another group, that group in which I have transplanted fat in connection with flaps of skin.

Slide 7.—This happens to be a girl who had a burn when she was a child, with an infected arm. The hand was contracted to such a degree that it was impossible for her to move her fingers; due not alone to scar tissue in the palmar fascia but also to the fact that the tendons in the hand were all involved in the scar and some of them were destroyed. This flap of fat was transplanted by the pocket method and I would not show it here because I am not attempting to show plastic procedures, except for the fact that the tendons were all involved in this hand and that in transplanting the flap of skin I dissected up all the tendons and transplanted a free flap of fat underneath the tendons in the palm of the hand and up as far as the wrist. I cut the fat on the flap longitudinally so that the tendons which were there and those which I made with silk lay in the cuts in the fat and were entirely surrounded and separate from each other.

Slide 8.—This is the result, two years after operation. The patient can open her hand; can touch her ring finger with her thumb.

There is one thing that I wish to say, however, regarding the transplantation of flaps of this kind. I was taught when I was a student that this fat was absorbed and I think it is, but it takes a considerable number of years. This hand has remained as it is for five years and there still is an excessive pad of fat. I have another patient I operated on twelve years ago with a similar pad of fat presenting still, but not to the degree that it formerly did. Therefore, I would warn you in cases of this kind not to have any more fat than is necessary for the procedure you have in mind.

Slide 9.—Here I am drawing attention to some transplantation of pieces of bone. I am not showing at this time transplantation of bone in the repair of fractures of the long bones. You have all of you done so much of that that I felt to bring up that point would be like bringing coal to Newcastle. I will only say, in passing, that I have transplanted bone in a considerable number of fractures of long bones. I have never had any difficulty with intramedullary bone transplants from the individual himself, nor have I had any difficulty



in those cases in which, following the suggestion of Dr. H. M. Richter, I have transplanted ox bone into the medulla of fractured bones. In fact, in none of these cases in which I have transplanted bone into the medulla as a splint have I had any trouble. Now whether that bone lives or dies, I do not know. I am quite sure that the subject is one that is not settled in spite of the evidence that seems to point to the fact that bone lives if transplanted from the same individual. That the bone at the junction of the epiphysis and diaphysis lives, I do believe but whether the shaft lives I do not know. I do know it produces a clinical result.

This particular slide shows a dog's head. This is a part of some experimental work I did with the idea of seeing whether I could close the normal foramen through which the nerves come out, with the object of preventing return of trifacial neuralgia in the human being. After doing transplantation of periosteum alone, transplantation of pieces of bone without periosteum, and transplantation of pieces of bone with periosteum, I ended by feeling that the transplantation of a plug of bone with a piece of periosteum attached to it, which lay on the outside of the bone and in which the canal had been cleared out so that there was no connective tissue left in the canal, would in practically every case produce a complete closure of the foramen.

Slide 10.—This shows no foramen at all. Here is the outside; and here the inside, showing the nerve which has grown down to this bone and has not penetrated to the outside. That it did not penetrate we know from microscopic sections that were made of the tissue over this bone which did not discover any filaments of nerve passing through this bone.

Slide 11.—This is a patient who had a trifacial neuralgia whose confidence in my operation was justified by finding that she did not have a return of the difficulty after the operation.

Slide 12.—I regret that this does not show very well, because it is a rather interesting case. The patient had had a fracture of the lower end of the fifth lumbar vertebra six months before I saw him. He complained of constant pain whenever he bent over. He could walk straight without difficulty, but on movement he had pain. I had had great success with the transplantation of pieces of bone in Pott's disease, as you all have had; they had been practically universally successful, and I felt that this particular case was one in which transplantation would give a great deal of benefit. I operated on the patient and I wish to tell you the result so as to save you from committing the mistake that I made.

The transplant was placed in the short spines. It was rather difficult to imbed it low down,

and I imbedded it in a section of sacrum, leaving a bridge of bone about  $1\frac{1}{2}$  inches which was entirely outside of bony tissue. Periosteum was attached and I was in hopes that sufficient bone would regenerate at this point to make a firm splint. Imagine my chagrin, when the patient returned three months after operation with this splint fractured at the point at which this transplant had not been imbedded in bone. It was broken, and the patient was again having his trouble, a thing of which he had been relieved when he left the hospital, because at that time he could bend without pain and without difficulty. I am quite sure that should I operate on a similar case I would see that the entire transplant was imbedded under bone or, at least, under periosteum at that site.

Slide 13.—This represents some experimental work that I did with the transplantation of parathyroids a number of years ago. I was much interested in the question as to whether parathyroids could be transplanted and live. I transplanted the parathyroid in a number of dogs. My results were very contradictory. I found that in some cases I could recover the parathyroid from the muscle under the rectus sheath in the dog, apparently living and apparently functioning. In other cases the transplant would be lost; and I am not ready to say at the present time whether the results which McCallum and Halstead brought out are true or not; that is, whether in those cases in which the dog has other parathyroids than that which is transplanted the transplant dies, and in those cases where there is a need of the parathyroid it lives. It seems to me possible that there is some other factor at work besides that. I simply present this to you as one of the cases in which I did recover a parathyroid a number of weeks after its transplantation when it did live. Others did not.

We talk much about the difficulty of transplanting highly specialized tissue. I have never been really sure in my mind whether the criticism brought against that procedure is just or not. You must remember that we have two factors to deal with. In the first place, we have a tissue which does not, probably, have the vitality of some of the lower types of tissue, as the connective tissue, and secondly, we are asking this special tissue to do more than we are asking bone or connective tissue to do; we are asking it not alone to live, but we are asking it to carry out a particular function, and if we asked connective tissue to do that I am not sure it would be done. So in these cases where we fail to transplant highly specialized tissue we may not always say that the results are failures because we do not find functioning tissue. It is a complicated question the answer to which has not been fully written out.

Slide 14.—We now come to a group of cases in which I have transplanted flaps of fat. I have done a considerable number of these; I should say in the neighborhood of sixty; I have transplanted fat about tendons which I have dissected out of scar tissue, about tendons which I have sutured together, about nerves in various places; I have transplanted into joints, bones, and other places.

This particular group of cases which we have here is that in which we have had to do the work in old, contracted, infected hands. I am not speaking of the type of infected hand where the patient can do something with the hand. I am speaking now of that type of case in which there is an absolute immobility of the fingers and thumb, the hand is as rigid as a board. This picture shows the full amount of flexion



Fig. 1.—Wesley Memorial Hospital No. 50,332. A. Osseous ankylosis of wrist-joint with atrophy and immobility following ulnar and radial bursal infection with extensions. Picture shows entire range of motion.

possible; and this the full amount of extension. So there is practically no motion in these fingers, nor in the thumb. The wrist joint is absolutely immobile. In this particular case and in about ten or twelve other similar cases, I performed the operation in two or three stages.

The first case I operated on was a case where I wanted to get just the best result of all. It was a physician who had such a hand, an able surgeon, and I wanted very much to do something for him. I made a mistake. I took out one row of bones and it was not enough. He got about 30 degrees of motion. If I had taken out both rows of bones in that wrist-joint and put in fat, he would have had about 50 or 75 degrees of motion, as I have found in subse-

quent cases; and I wish to give you the warning in such cases to take out enough.

In none of these cases that I speak of has the fat been lost. In every case the fat has at least clinically remained in the joint. I have not opened any of these joints afterwards to see it there, but it has remained and the patients have a fair degree of motion.

That is, generally, the first operation. I sometimes also dissect the tendons on the back of the hand and place the fat under and over the tendons on the back of the hand. Then at the second or third operation I dissect out the tendons on the front of the hand and up



Fig. 2.—Result two years after fat transplant.

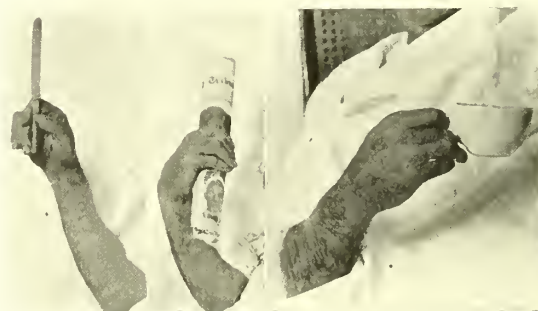


Fig. 3.—Result two years after fat transplant.

onto the wrist into the forearm. Let me warn you, if you do this, to use magnifying glasses, because you must be very careful to preserve the nerves that go into the hand. Use magnifying glasses so that you will not miss a single one. Begin in the arm, where you get the large nerve and follow the nerve down with its various ramifications. Then transplant fat underneath the tendons and fat over the tendons.

In transplanting fat I have found, since I began to talk about this, that many surgeons



do not transplant enough fat. My own fat transplants have been at least one fourth inch in thickness, sometimes more. Another thing. Get tissue that is filled with much fat and little connective tissue.

Slide 15.—This is the result in the patient whom I showed you a minute or so ago, after three operations. The man stood a lot from me, but he is now able to hold a knife and drink from a cup, and though he cannot sew with that hand nor thread a needle, he can do all of the gross things that a laboring man wishes to do with it. It required, however, three operations and practically two years, coming back at intervals, to get that result (Figs. 1, 2 and 3).

Slide 16.—This is how these hands look after the fat is transplanted. You will notice how full that hand seems. It is filled out with the fat, filled out in the front and filled out in the back, a large pad on both sides when you get through with it. I have been much gratified to find that I have not had a single case of serious infection in any of these cases. It has been remarkable, because we do so much operating on them, so much dissection. It is rather a tedious affair, and you would expect some infection but, as a matter of fact, not once have I had this fat come out. I have had, one or two times, a little infection about the clips and have let out a few drops of pus there, but in no case have I had infection and lost the transplant.

Slide 17.—This is the result in the case I just showed you. This man, you see, can touch his thumb with his little finger, he can bring his thumb up to his index finger. This is the full amount of flexion that he can secure and this the full amount of extension. You will say, not a particularly good hand; but the man is fully satisfied because he can do these gross things. He has not a great deal of strength in the hand but I believe that will increase as he goes on.

Slide 18.—Here is another case after operation. You see the full amount of extension, the fact that he can touch his little finger with his thumb; and here, the full amount of flexion. There is always a good deal of difficulty in these cases outside of the things that I have mentioned because there is always more or less shrinkage in the muscles of the forearm and ankylosis in the finger joints and it is rather difficult to break up that ankylosis and get a functional result; but that you can do something this hand is an evidence.

Slide 19.—This is a patient who did not have an infected hand. The superficial and deep tendons of the ring and little fingers had been cut and he came to me about three months after that. Of this group of cut tendons I think I

have in the neighborhood of ten cases; I mean cut tendons without serious infection. In this case the tendons were dissected out, sutured end to end; and this shows the amount of extension, and this the amount of flexion.

In passing I think I ought to mention one mistake that I find very constantly, and this particular patient represents that injury. This patient had the index flexor cut and the flexor of the thumb cut—the flexor longus pollicis. He had also one of the flexors of the ring finger cut, I have forgotten which one. This was operated on and the surgeon had sutured the end of the median nerve to the distal end of the flexor of the index finger. I have found that occurrence in four different cases in which I have operated subsequent to



Fig. 4.—Wesley Memorial Hospital No. 50,951. Photograph one year after suture of median nerve and tendon of flexor longus pollicis with fat transplant. (Operation 9 years after injury.)

previous operations, showing how easy it is to make a mistake and suture the end of a cut nerve to a tendon. They do not look unlike when they are cut. With the magnifying glass, however, you will have no difficulty and probably would have none if you were on guard. In this particular case the tendons were sutured, the median nerve was sutured and this was the result about a year after.

Slide 20.—This was an extremely interesting case to me. I am not reporting tonight on the subject of nerve results, but this operation was performed nine years after the primary operation. Therefore, this median nerve had been cut for nine years and this man is getting some regeneration of the median nerve at the present time. The tendons and nerves are of course wrapped with fat, as I have described (Fig. 4).

Slide 21.—This patient's arm was cut in a sawmill and all the flexor muscles of the fore-

arm and the median and the ulnar nerves were cut. Suture by deep through and through sutures was done by his company surgeon and he came to me six months after the injury. I separated the nerves and sutured them as near end to end as I could. One I could suture end to end and the other I had to piece the nerve into the vein with a defect of about two inches. The muscles were sutured to their proper oppo-



Fig. 5.—Wesley Memorial Hospital No. 50,268. Photograph 16 months after suture of ulnar and median nerves and all the flexor tendons of the forearm with fat transplant. Operation 6 months after injury.

site muscles and tendons and fat transplanted. This shows the result about nine months after the injury. You notice he does not have a complete flexion as yet, but he is able to use the hand in the sawmill as he always did, and his doctor tells me that he is getting a regeneration of both nerves. I have not examined him (Fig. 5).

Slide 22.—Now I have spoken somewhat about nerves. I have sutured probably from ten to fifteen nerves. I have not the exact number with me tonight. This is one of the cases, a man who had the musculocutaneous, the ulnar and the median, all cut. I operated on him after some months and you see the result he obtained functionally. He has also return of sensation. There is some slight impairment on the little finger still but the remainder of the hand shows a very satisfactory result. In this case free flaps of fat were used as in the other cases.

Among these nerve cases are two cases of brachial plexus injury in which I dissected out

the brachial plexus and wrapped pads of fat about the nerve. One of the cases was very interesting to me. The man was hurt in a railroad accident. He had a fracture of the humerus and evidently an injury of the brachial plexus. I dissected down to the brachial plexus and found the fifth and sixth roots badly injured; I wrapped fat around all of the roots and put the man back to bed. He was complaining of most intolerable pain. Imagine my chagrin when I came back a couple of days later and found that he still had just as much pain as before. I operated again at the end of ten days, cut down and found the musculospiral completely imbedded between the ends of the bones, and it was that which was giving him the most of his pain.

Slide 23.—This is representative of a group of cases where I transplanted pads of fat to cover the vessels in the axilla in cases where I removed carcinoma of the breast. The first case I operated on was this particular case and it made a most beautiful recovery. I had always brought down a pedicle of the pectoralis minor to cover the vessels, after the method described by Dr. Murphy. I do not know whether he originated it or not but I learned it from him. However, the fear that carcinoma might develop about the root of the pectoralis minor made me think I would prefer



Fig. 6.—Wesley Memorial Hospital No. 44,281. Photograph showing result of transplant of fat about vessels and nerves after radical operation for carcinoma of the breast. Picture taken 17 days after operation. Note free motion and fullness over vessels.

some other method of protecting these vessels and I therefore transplanted these flaps of fat. The first case, as I said, was a perfect result. The patient left the hospital at the end of ten days without any trouble at all and remained well. The next case became infected and the entire pad of fat, which was as large as the palm or my hand or larger, sloughed out. The third case became infected and the fat came out in droplets. So I stopped using large pads of fat to cover the vessels because, while all of us possibly get infections—I do in Chicago,



and I suppose you do in St. Louis—it is uncommon for a carcinoma of the breast to become infected. Therefore it seemed to me from these experiences that it was not good surgery to use large pads of fat in that group of cases (Fig. 6).

I have had that same experience with fat extruding from transplants in osteomyelitis cases. I have used fat transplants in osteomyelitis cases in two or three instances, cleaning out the bone thoroughly, putting in a large pad of fat, and in each case the fat oozed out drop by drop and, it seemed to me, did no good. I have also used fat in tuberculous joints, and I believe it has a possibility of advantage. I must say that I have not had the courage to try it in early tuberculosis of the joints, but it does seem to me the method is worth trying. The cases that I operated on were cases with sinuses and I think the results there could be best described by saying that the patients were no worse off afterwards than before they came to me. However, it does seem to me that in those cases where there is no secondary infection with sinuses it might be possible to hasten the recovery, as for instance in tuberculosis of the wrist-joint.

I have operated on the wrist-joint in other conditions than tuberculosis. Only last week I took out a fractured scaphoid and transplanted a pad of fat to take its place, and the patient apparently has a perfectly satisfactory result.

Slide 24.—This is a patient who had a lower lip removed by cancer paste, and in addition to the lower lip all of the skin down to the symphysis of the jaw was removed, so that the patient had from the upper lip at this point down to here a blue scar with the teeth showing and the saliva running out of his mouth. A skin plastic was done, and I transplanted into this tissue a pad of fat to build out this lower lip. Here is his lower lip now. As you see, he can close it completely. He talks, and this retains his saliva. It is a mobile lower lip that is not contracted by scar tissue.

Slide 25.—This is a boy who had a burn when he was young. Unfortunately, I did not have a picture of the boy before I operated on him, but this lip is drawn down in an attempt to give some idea of the appearance. The lower teeth were exposed and he constantly drooled saliva from his mouth. A Y-shaped incision was made in the chin and the skin was brought up over the sides. You will remember that this is all scar tissue, the burn having extended down into the neck. At the second operation a hole was made in this scar and pads of fat were transplanted into the scar tissue. You will notice that is smooth, pliable and soft. I know there is fat there, because at the end of a year he came back with this corner of the mouth not up to just the position he would like to have it, so I made

another incision and saw fat there. I suppose it was the fat I put there, because there was none before I put some in (Fig. 7).

That concludes the groups of cases that I had in mind to draw your attention to. I must say that I have been surprised and delighted to find that the tissue which I transplanted in connective tissue healed in in practically every case without suppuration and without being lost except in those two groups of cases of which I spoke—carcinoma of the breast and bony cavities after osteomyelitis. I have transplanted into bone cysts and had it remain in position and apparently heal in position, and the bone grew strong afterward. The exact mechanism of that procedure, I do not know.



Fig. 7.—Wesley Memorial Hospital No. 47,223. Photograph showing result of fat transplant into scar. Photograph on the left shows attempt to represent the deformity since unfortunately no photograph was taken previous to the operation.

#### DISCUSSION

DR. WILLARD BARTLETT: In my work the transplantation of fascia and fat has been for conditions very considerably simpler than most of those for which the speaker has done this work. I have transplanted fascia lata into hernias only for the treatment of the postoperative ventral type. One of them became infected but in spite of that the flap did not come out and the patient is well, eighteen months after the operation.

In the second case we lost a portion of the skin flap over the fascia lata, and in spite of the fact that this left one aspect of the flap uncovered the flap lived and during several weeks we could see that flap of fascia lata lying there with buds of granulation tissue growing up through it from below, absolutely perforating it. There was just a little space, perhaps the size of the thumbnail, which was not covered, and that patient at the expiration of three years has just written me saying that she is entirely well with the exception of that little area, below which she has a tiny hernia, showing that this flap which lay uncovered for weeks by skin all healed in and took care of the defect which was covered, whereas the little bit, which was not covered by this flap which we thought we would lose, has reproduced a tiny hernia.

I have twice made transplants of fat from the thigh for the reconstruction of the breast. They were benign cases of chronic fibro-cystic mastitis necessitating the entire removal of the gland-bearing tissue of the breast. In both cases the ladies objected to having an entire amputation of the breast done, so that in each case I made a crescentic incision in the shadow cast by the breast as a woman stands, peeled the whole mass upward, shelled out subcutaneously

the entire gland-bearing tissue, took from the thigh a pad of fat, estimated about 50 per cent. larger than the resected tissue, and placed that in the defect. In the one which has gone four months the breast really bears quite a resemblance to the normal organ, but bears out, by being too large, what Dr. Kavel says in regard to the size of these pads of fat. Having overestimated the loss of fat which would take place, I built that breast a little too large. The other patient is still in the hospital at the expiration of about ten days, but things look well in her case.

In another instance in which I transplanted fat into a defect caused by scraping out a tumor supposed to have been a mild sarcoma of the femur, a mild infection took place, but the fat exuded drop by drop over a long period and I judge there is now no fat there.

In another case I chiseled out an ulnar nerve which was caught in a fracture just above the elbow, wrapped the nerve in a flap taken from just underneath the skin of the girl's arm, with a reasonably satisfactory result. It had been held in that position twelve years and when the weather changes or when the girl gets exceedingly tired she comes in and tells me that she has all her old symptoms, but the family tell me that she is much improved over what she was.

I became so enthusiastic after the publication of Kirchner's—unfortunately, not our own Kirchner, but a German writer—original work on the transplantation of fascia lata that I did twenty-two animal experiments with the students at the surgical laboratory, to test on dogs the viability of flaps. There were infections but the flap held in every case except one. So one can be sure, as Kirchner stated, that fascia lata will grow in even in spite of an infection.

DR. KAVEL, closing: I merely wish to be sure that I am not misunderstood about the transplantation of tissue from lower animals. What I meant to say was that I have transplanted bone from lower animals into the medulla of humans and had the human bone regenerate satisfactorily as to its length, size, shape, etc. I do not say that that tissue grew which I transplanted from the lower animals.

I have used fascia in a number of places that I did not mention. For instance, I have made fascial swings and hammocks for the kidney in six cases in which the kidney had a tendency to come down. In fact, I had a paper all ready to publish on this subject and when the German surgical congress was in Chicago I told them all about it. One of Dr. Kocher's assistants told me then that he had already done this and had published it in a German magazine. He was kind enough to send me a copy and I found that I had nothing original to offer.

Concerning the transplantation into scar tissue, I have transplanted in other cases besides those here mentioned. I feel that one should be a little careful in transplanting fat into a large scar; just how large I do not know, but I do know that scars an inch or two inches in diameter can be so treated. At least, I have done so in a few cases with very satisfactory results. I had one patient with a scar on his back 10 or 12 inches in diameter and I transplanted some fat into that scar to soften it, after undercutting and bringing the scar together, to repair a chronic ulcer which was present in the center of the scar. That scar broke down where I transplanted some of the fat, so that I feel one should be rather conservative in transplanting into large scars. I have also reconstructed breasts after amputation by the method mentioned by Dr. Bartlett. Here we have not such large areas as after amputation for carcinoma and the results are satisfactory. I have had similar results in wry neck and Dupuytren's contracture.

## REPORT ON MEDICAL EDUCATION\*

A. W. McALESTER, M.D., CHAIRMAN  
COLUMBIA, MO.

We believe the time opportune to broaden our views on medical education. The world has an unjust and poor opinion of the valuable work done by the medical profession, both as to saving human life and from an economic viewpoint. Ask a hundred men, taken at random, their opinion of a doctor, and 90 per cent. will say, Oh yes, he is a fairly good kind of a fellow; my wife has so and so to tend the little ills of our children;" then adds, "but—"

The *Medical Review of Reviews*, Jan. 1, 1917, gives the answers of twenty-eight well selected men as to "What is the matter with the medical profession?" The great majority gave their opinions based on their likes and dislikes of some individual doctor they had employed. Only one of the twenty-eight covers the ground of the work done by the entire profession. He says: "Attack is more common than praise; a profession whose members day after day lay all humanity under obligation to them at the risk of their own lives. All honors that are given so spontaneously to heroes of the battlefield ought to be accorded without stint to the brave medical men who fight without ceasing against the greatest foe of humanity, disease; the present world-wide war against disease. The medical profession is now entering on the greatest phase of its history in development of the science of preventing the plagues that afflict humanity. This will still the voice of the scoffer" (Strauss). This quotation alone justifies the medical instruction to laymen. Furthermore, they ask and expect the medical profession to eradicate disease and thus wipe themselves out of existence. Yes, we do it—is there another occupation asked to work against their living?

Medical science knows no boundary line; our ideals are higher than mere selfishness or wealth; our ideals stir the soul with hope and desire to better mankind. It considers not only things to save life but also invades economic conditions that add wealth and happiness to individuals, towns, cities, states and nations. Whether we find the world at peace or struggling in the iron grip of war we do not stop to ask, is all this destruction from national ambition, national zeal or national selfishness? We accept medical truths from the workers of any nation, whether a Virchow or a Pasteur. The great national point to us is, what are we doing as Americans to aid? The medical profession has suffered and been rebuffed by society long

\* Read in the General Session Sixtieth Annual Meeting, Missouri State Medical Association, Springfield, May 15, 1917.



enough. The busy world has not given our profession due credit as to the saving of human life, human suffering, nor have they recognized our monetary value to the collateral occupations.

How may matters be bettered? By agitation. Former President Taft, in speaking about enforced peace said: "This thing has to be agitated and agitated, in season and out of season, to reach the minds of all people; some minds resist knowledge." Our Association, in common with many others, has made repeated efforts to impress on laymen that we are now on a safe, scientific basis that is being utilized to preserve their lives and add greatly to their wealth. In fact many industries could not otherwise be carried on commensurate with our high state of civilization.

We believe our school system is the proper place to make lasting impressions for good. It is a true American idea. The state desires to raise a healthy, intelligent race, hence our state university, high school and common school, all paternal for self-preservation. That means education, yes, compulsory education by the state. It does not matter how much is done by voluntary organizations; that does not relieve the state. It is high time that men of large wealth, wealth made under protecting laws, should recognize our state university as the most stable repository for their beneficence. Voluntary organizations alone are not expansive; they are too transient in their very nature for state dependency not controlled by the people. The state welcomes voluntary aid. The The Rockefeller Foundation says: "In cooperation with the government of the Philippine Islands we equipped a hospital ship as a traveling dispensary, bringing medical relief to a destitute population, making the inhabitants of this more amenable to civilization. Influence with some of the wildest tribes has shown to be possible and can be applied to an unlimited extent. The International Health Commission is now headed by Gen. W. C. Gorgas, showing we are working through governmental agencies, state and national and local, in cooperation with the medical profession, public schools and social agencies; in other words those agencies which people regard as *their own* and on which ultimately responsibility must inevitably rest." If the Rockefeller Foundation with a capital of \$100,073,000, says cooperation with the government and the people if necessary that the greatest good might come, surely any other less pretentious organizations could say the same things, thus making people supreme.

Just a few words as to the rights and duty of this Association. We are the legal, authorized exponents on all matters pertaining to health of our citizens. We have the right and duty to erect a standard form of medical education as

the minimum prerequisite for admission to membership. The burden of proof as to how and where rests on the applicant. If shown to be satisfactory he is admitted. Fortunately, at this date the regular medical schools of this state giving the degree of M.D. are standardized, a happy condition resulting from the prolonged efforts of this Association.

The University of the State of Missouri is the only school in which this Association has the right and duty to say changes must be made. We are taxpayers and thereby become stockholders. This establishes our right not only to be heard but also to take action necessary to get results. The chairman of this committee asked for betterment for thirty-seven years with no as the answer. The last time he requested improvement commensurate with the status of medicine and did not succeed. He then suggested to discontinue the insufficient clinical facilities. This was done and remained so till (as I have been officially informed) some time in April, 1917, when the clinical instruction was resumed by the majority of the retained clinical faculty, making the hospital rates of \$7 per week to clinical patients. The scientific laboratories are standardized. The hospital instruction should also be standardized.

The dominant motive of your committee in looking into the conditions of the medical department is not to make personal attack, "muckraking," but to effect improvement by those responsible for the management. If demanding the rights of and duty to suffering humanity, of the man that God created in his own image is "muckraking," then your committee pleads guilty after waiting forty-five years. We simply desire to give the salient facts to this Association and through it to the taxpayers. This Association, within its rights and duty as the legal exponent on all matters pertaining to the health of our citizens, passed resolutions and sent committees to the managing authorities requesting betterment, but the hue and cry was started in university circles that you are against the university when in reality those responsible for such conditions are the guilty ones. Still the state is in the anomalous condition of exacting statutory qualifications before entering on the practice of medicine. Common law, all law, says when a state requires certain qualifications of a citizen before entering on the practice of medicine she has to furnish said citizen with the opportunity to acquire such knowledge. Does the university do it by only giving one half? Rather humiliating to a Missouri boy, a stockholder, to take his hard earned dollars and go begging elsewhere for his standardized M.D. to fill the statutory requirement to practice, thus alienating him from our university.

The reasons most commonly assigned are, "that the doctors of the state did not want it

done." Second, "no money." There was a time when both answers were true, but the doctors' opposition ceased long ago with the passing of proprietary education. What about the money? There was a time when the university celebrated when the legislature gave \$67,000 for the entire university. What about the last year? In 1908 \$500,000 was given and a continuous rise has followed till now the catalogues boast of receiving \$1,225,000. Who gets it? The university today with over \$2,000,000 in its plant and \$1,000,000 in permanent improvement all put there in the last forty-five years. The medical department with two small buildings, and one of them made possible by the liberality of the late Mr. Parker for the benefit of the medical department, has not been utilized as such from 1910 to April, 1917. Quoting from a published article written by ex-President Jesse bearing on this subject he says, "we have taken reasonably good care of fowls, fish, birds, beasts, game, grasses, grains, fruits, forests and some lines of procedure to wise ends. In spite of all the good that has unquestionably been done man, in comparison with domestic creatures, has not yet had his full share." High authority indeed. Why then is the medical department discriminated against? This Association has frequently shown that the doctors want it. The money plea no longer exists. Can it be that the medical profession has not returned value received to the wide world. We can throw down the gauntlet to any one science or all put together as to our serving man, the image of God, as to our economic value. Fifty years of rapid progress, the wonder and admiration of the intelligent world. Take one serum alone, for diphtheria, without which the death rate was from 50 to 80 per cent. till 40,000 children were lost in one year. Today the death rate is less than 5 per cent. By statutory law life is worth \$5,000 so it is easy to calculate the enormous amount saved.

Who made our Southern States as safe to life as any zone in America? Pasteur! The great quarantine system permits the busy millions to sleep in peace and rise to health to ply their respective callings. These are enough to illustrate. Now take our value to many collateral sciences which owe to us their real foundation—a new starting point. Sanitary engineering in its wider sense, nearly all the great advances in agriculture, rest purely on the great Pasteur. The preservation of all animal life. Statistics show \$1,000,000 annually saved in hog life to our state and \$18,000,000 to the United States in cattle and sheep are saved from the ravages of blackleg. Without Pasteur the great and ever increasing dairy interest would cease to be profitable. Today milk can be transported to the babies of the world with great economic

value to the producer. Our knowledge of bacteria causes many plants to increase fourfold. Our transportation systems would be but a pest distributing point; the ships that sail the seas a death trap; the Panama Canal would have never been built. Goethals, the great engineer, with \$400,000,000 at his command would have long since shared the fate of the French De-Lesseps had not the great Dr. Gorgas preceded him and with less than twenty millions made the zone the cleanest spot in the world.

Without our knowledge sickness would destroy the great armies, instead of shells. What would the condition of the water supply of this world be. If the Lord permits the human race to go on multiplying to fill the earth the water supply will tax the skill of our profession to its greatest. It will then be the leading question of all civilization. Do these collaterals give us credit? We sit still, "like sheep before their shearers dumb, we open not our mouth."

Surely the public needs are urgent, so urgent that the preventive medicine department of our university needs enlargement to train sanitary officers. Who of us are so expert in sanitation to step without further training to be both effective and economical in administration to state, cities, counties. The most effective way is for this department to go to our school system with such instruction as necessary to secure cooperation. The school system is surely effective, though rather slow at first. Effective because it raises up an appreciative race; effective because the instruction given is organized and given by experts, given by our highest authority, the university. The school boy can be lastingly impressed, he has no preconceived ideas to eliminate. All that this department can do to impress adults is to demonstrate publicly what can be done to prolong human life and prevent the spread of infectious diseases. It could show the economical value to the world; this showing to both high schools and general public would do more to kill quackery than all legislation. Whenever you show a Missourian you are doing good things for him our university can get all the money needed. All governments are striving hard to develop the science to eradicate the plagues that afflict humanity. Our government is doing much, our state university is doing but little for want of proper support. The preventive medicine department should co-operate with the state board of health, and with the high schools of the state for effective education of the people in public health matters. This Association has done much to that end though without equipment and appealing to business men.

*How interns can be made more efficient.*—Perhaps the word should be eliminated. Advancement can only be made by erecting the ideal and



when reached raised still higher. Interns as they now exist are not ideal from an educational standpoint. The student is given the degree of M.D. and turned loose to shift for a year of practical work so necessary to apply the science already acquired. He needs a guide to obtain the maximum result instead as now the minimum. How? Standardize the hospital and its staff, then articulate with our state university. Practically you would find all unutilized hospitals anxious to become articulated, standard hospitals. If the state had its own metropolitan hospital this would still be the solution of the vexed question of the fifth year's work.

The solution of the fifth year's work. Our university is ideally located to utilize all metropolitan hospitals not otherwise utilized. Good art at the minimum cost to the state and encourage the highest skill in the administration of said hospitals and at the same time bringing strong support to our state university, that a student would then begin medical life prepared to go to the homes of the afflicted. The student would not then be confined to one hospital.

Graduate School. If there is anything urgent in this state it is the establishment of a graduate school of medicine by the University of Missouri; a school that applies all that science has proved good up to the present day, a school to go into new fields. Our science is a rapidly advancing science through laboratories and hospitals to show the application. The practitioner needs to see and hear the man who made these advances. Statutory law requires standard knowledge before entering practice, and this special privilege implies a continued progress to remain standard. The practitioner has no laboratory or hospital. It is only our city cousins who are in charge of our great hospitals backed by practical laboratories, laboratories for original work. To be available to all as common property this must be done by the university. There it is common and as free as the undergraduate. Other universities may have them but that no more relieves the state than it does in undergraduate work. They are not common property. The practitioner goes once; why does he not return year in and year out? All advances are not made in any one hospital or by any one man. To obtain them he must travel the world over, which is impossible; then implant on all standardized articulated hospitals giving graduate work a mobile and interchanging faculty; new men who have made these advances; have fixed dates as in local faculties. There is a demand and, yes, a yearning for such a mobilized faculty. Take the occasion of a few years ago when some 5,000 doctors rushed to Chicago to see and hear surgeons of note from all parts of the world. The organization is now so large that attendance has to be limited. His patients need it, yes, demand it, statutory law strongly implies it.

This graduate system could easily be put into action. The university to make the standard, hospitals conforming to said standard on the same basis that our high schools are standardized and articulated. This, as we have shown, would also serve the fifth year's undergraduate, not confining the student to one hospital the entire year. The practitioner's course would be short. When new men of note were on duty we country cousins would flock to you. Some cities could have several standardized hospitals which would mitigate conflicting interests of the "ins and outs," leaving only a laudable rivalry.

A graduate school could also give courses for unforeseen exigencies. At this juncture our government needs a course given to better medical men on medical, surgical and sanitary training for our army and navy. Where should we turn but to state universities as these have and are receiving governmental aid. Missouri University is not prepared to give such. Your committee saw a notice that the Washington University would supply the deficiency. We at least can welcome such a course; it breathes of patriotism.

It especially devolves on this committee to make plain the fact that the medical department has been and still is discriminated against. How can a state university claim to be great when the management neglects the highest prerogative of a good state to raise a healthy, intelligent race and preserve human life, then boasting to take the money of the taxpayer for lower life and for economical benefits. This discrimination is against man, the "man created in the image of God"; against the suffering woman and the helpless child; against human rights and in favor of human interests. Is the university management "genuinely human"?

---

#### A PLEA FOR THE ESTABLISHMENT OF STANDARDIZED COUNTY GENERAL HOSPITALS\*

FRANK G. NIFONG, M.D.  
COLUMBIA, MO.

To make a plea for the betterment of medical service in the country communities I trust will not be accounted presumptuous in one whose experience has varied from work in the eleemosynaries and slums as well as in the more aristocratic "West End" of our largest city, to a country practice among the denizens of the "white oak" and "river hill" communities, and service also in our Athens of Missouri with its state university and other educational institutions.

\* Read at the Sixtieth Annual Meeting, Missouri State Medical Association, Springfield, May 14-16, 1917.

This experience in country work and smaller towns has, in the light of former experience in the city, brought forcibly to mind some of the needs of the country, and shows wherein the country people suffer in comparison with city folk, both rich and poor, in the lack of proper facilities for the modern scientific care of their sick. It is, of course, a valid plea that the less populous communities cannot erect and maintain schools and hospitals. Those communities must suffer the hardships of pioneers; but in the more populous and wealthier counties there are no reasons for lack of schools and hospitals. The day is not far distant when such a county will be in disrepute if it does not have hospitals as well as schools and churches. It should not be long until counties as well as the larger towns and cities, recognize their obligations to the sick and injured. Such a matter should not be left to the initiative and public spirit of a few individuals; it should be the concern of the whole community.

What have we now? How do our counties care for the sick? We have always our devoted and self-sacrificing doctors who give their best, physically and mentally. These doctors can all graphically describe their handicaps and limitations; can tell you of the useless waste of life due to lack of proper facilities in caring for their sick, not only the poor but the well-to-do, who suffer and die because they lack hospital service in emergency or cannot be transported to a city hospital.

My personal experience in the country has demonstrated that a number of lives, rich as well as poor people, might have been lost each year without hospital facilities.

The prognosis for many acute abdominal surgical cases and emergency surgery in the country distant from the city and the surgeon is quite different from the prognosis of like cases in the city. It matters not that the patients may be able to pay for hospital service. More deplorable is the condition of the poor person unable to pay for a surgeon's or physician's consultation or to follow his directions even should he get such attention for nothing.

At present we have our county hospitals, another and more soothing name for the poor farm. These are not hospitals in any sense of the word. Our county courts appoint some political doctor-friend to look after the poor if they fall sick. Many of these county farms are a disgrace to the county and the state; and to call them hospitals is a misnomer. We have a new state law providing for county tuberculosis hospitals; but we have no such hospitals because the plan is impractical. Heretofore, we have had no law making it possible for the county to erect a general hospital to care for all classes of sick.

A county general hospital must almost of necessity be an open hospital, allowing all legal practitioners service. It may not even have a staff; or if it has, they should only serve charity cases.

Now, of course, there are many objections to such open hospitals. They are difficult to systematize and standardize, and there may be much work done by incompetent men. There is a just and great cry now against small unregulated and unstandardized hospitals and their abuses. It is a sickening thing to see a pseudo-surgeon plying his *trade* in a so-called hospital.

We justly cry out against such malpractice and against such false institutions; they put surgery and medicine in disrepute. However, it is a far cry when all the crying is done by the superior surgeon who serves in the great metropolitan hospital. He is liable to be somewhat of a pharisaical judge. Even the little "one horse" hospital in the country may serve a purpose even if it cannot measure up to the standard of a city hospital. Many of us in the country know that the benefits of even a very inferior institution may so far outweigh the abuses as to make the abuses negligible. We cannot all take ourselves to the great clinics; we must endeavor to bring as much as possible to ourselves. In the plea for county general hospitals, I hope to show you how such institutions might become of inestimable value both to the people and the profession, and in time could be standardized and measure up with the best we have in our cities.

Radical and revolutionary changes in medical science are making necessary many changes in medical practice. At the same time, we are experiencing a complete change in social, industrial and governmental relationship to medicine. The movement is iconoclastic, even brutal, breaking down many of the ideals of the doctors of the old schools. The old empiric doctor is going. Let empiricism go; and let us have true science; but pray, do not take the kindly spirit, the individuality and the lofty ideals from us. We should protest against all efforts to make us mere parts of a huge governmental machine. Leave us our individuality and our own initiative and incentive to work. One can conceive of nothing more harmful to the development of medical science than governmental control—not governmental assistance. We deplore and should antagonize the hospital and clinic abuses so prevalent now.

Contract practice may be expedient, and seemingly almost a necessity in some large industries. It certainly is antagonistic to the dignity of our profession. When contract practice is extended to groups of individuals not working in great industrial plants, it is subversive of the dignity of the doctor and of the best interests of both the patient and himself. For one



who believes in democracy, the utmost freedom and initiative for the individual, these various socialistic schemes are most discouraging.

However, changes are coming; they are even here. Medicine is a true, great science; individually we cannot compass it. We must have "team work"; must make "group diagnoses." We must have a division of labor and each man harmoniously do his "bit" if we render the best service. We must have modern clinics in which to work—a medical focus around which we may gather. This nucleus in cities may be hospitals and medical schools. May we not also have a nucleus in the county general hospital? This should be a medical center for every county where men coming in contact with their fellows may be stimulated to do better work. Here each man would find for what special service he was best fitted.

The benefits of such hospitals would be first for the sick poor, affording them the humane treatment accorded our urban population. Likewise, the sick rich may be cared for much more satisfactorily, especially in emergency. It would also be an asset to the community as an education procedure, promoting health education by the general interest excited. I have mentioned before that such an institution must be stimulating and educational to the local physicians who serve therein, and will make for harmonious and noble emulation rather than the sordid envy and jealousy too often exhibited.

With the laity nothing would more quickly break down the prejudices and ignorance seen in many communities than the educational value of a hospital. In time, a proper appreciation of the benefits of a hospital and of the great service of the profession will come to that community; after that there will be little trouble with falsehood and quackery.

But what of the administration and standardization of such an institution? Could county general hospitals be standardized and be brought up to the proper grade of efficiency?

I apprehend not more but less difficulty in accomplishing this than there would be in private or sectarian institutions. County general hospitals could be made more easily amenable to laws and regulations and more likely to show efficiency if only because they would be the concern of the general tax paying public. They could be regulated by the state board of health and required to measure up to certain standards.

Conditions would be still more ideal if we had medical education established for Missouri, such as you have had pictured to you by Dr. McAlester in his educational report. Then we might easily have county and all other hospitals that desired affiliation with the state medical schools meet certain requirements to become accredited hospitals. Then we might demand a

certain standard of work by staff and nursing force for them to become accredited and affiliated, much like the plan of linking the high schools and the university as practiced now. The medical school could supply interns to such hospitals as measured up to the proper standard.

I wish to call your attention to the law passed by the last general assembly, making it possible now for counties to vote bonds for the establishment and maintenance of a county general hospital. The law provides specifically and wisely for its administration and maintenance, and makes it possible to care for all classes of sick, including tuberculous. This law is patterned after the Iowa law, which is working successfully. The law is House Bill No. 746, introduced by Representative Toalson of Howard County. Senator Harris of Boone County introduced the same bill in the senate. He generously assisted Representative Toalson, letting his own bill die.

#### DISCUSSION

DR. ST. ELMO SANDERS, Kansas City: For a very long time I have been looking to our state university for help in this matter of medical education. At one time, when we had a number of medical colleges in Kansas City, we made an effort to do something for the university and to get the university to do something for us. I remember meeting one of the members of the Board of Curators of the university who said, "My conscience, how you fellows talk about the clinical facilities in Kansas City. Don't those boys down in Columbia study the same textbooks as you fellows do?" Now there is the whole thing in a nutshell; that, to my mind, has been one of the chief troubles with the University of the State of Missouri, the attitude that they can "study a textbook," and those who are responsible for that feeling have been members of the board.

Now there is one thing above all other things necessary in getting anything done, and if we want the University of the State of Missouri to have a proper medical school, a school that will have the proper facilities for the men and the women who are entrusting themselves to its charge and putting the direction of their medical career into its care, we will have to get to work, we will have to get right down to advertising. I mean letting people here, there and everywhere throughout the state know what the university needs and how to go about getting what it needs. I am ignorant of the needs of the state university; but I come here and I listen to the wonderful plea that Dr. McAlester has made, I listen to the wonderful plea that Dr. Nifong has made, and I learn that much is needed and that our help is needed, my help and your help. I know and you know that if the members of this Association were to give ten days out of every month here and there, for a short time, we should accomplish something for the state of Missouri, something that the state needs and that the profession needs and that is well worthy of our efforts, but in order to do that we would have to get down and dig and somebody has got to do it if we ever get anything done for that school, because the whole medical profession is uninformed in regard to the needs of the state university.

DR. DANIEL MORTON, St. Joseph: I would speak to the point of the county hospital. There is no question but that under present-day conditions of social life, community life, and of the medical profession, there

will have to be a reorganization of our medical agencies for the purpose of bringing to those who are sick the present day advantages of scientific medicine. This suggestion of the county hospital is one effort in that direction.

There is one feature of the county hospital which needs to be emphasized at the stage this question has now reached in our state, and that is the matter of the medical instead of the surgical side. I am afraid that the idea will prevail, in and out of the profession, unless that point is stressed, that the county hospital is intended to be a surgical hospital, that in that hospital there will be treated surgical cases principally.

The idea of surgery is so closely identified today with the thought of the hospital that it is difficult for us to separate them, and the laity have come to the conception of a hospital as being a place where people are taken for the purpose of cutting them up.

There should be some emphasis made relative to the medical side of the county hospital, and you will pardon me if I say, without any reflections at all on anybody who may be concerned with county hospitals, that it is my judgment that the medical work of the county hospital is going to far outstrip the surgical work for the simple reason that the population of the county will not furnish, except in those counties that are situated in or about cities or large towns, a sufficient amount of surgery alone to keep on the staff of that hospital men who are sufficiently adept, from constant practice, in the highest skill of the art—for surgery is an art.

There is one feature that I would like to have heard Dr. Nifong dwell on, and that is the point of the medical laboratory in connection with the county hospital, a county or community medical laboratory. Scientific medicine today is based on laboratory work. The researches of the clinical laboratory are devoted to the practice of medicine in the same way that the researches of the physical laboratories elsewhere have been applied to all other pursuits of life.

The scientific practice of medicine does not depend entirely on the acute reasoning of the man who is the doctor, nor on his acute observing powers of the patient, as it did in the past, but it depends for its real, scientific basis on the physical findings in the medical laboratory of the secretions and the excretions and the solids and the fluids of the body of the patient, and on their proper relation to treatment and diagnosis; and these facts are added to the observation of the clinician at the bedside, and the sum total applied to the benefit of the sick. That is what constitutes the practice of scientific medicine in this day.

DR. JOHN G. SHELDON, Kansas City: I might take this discussion up where the last speaker left off, and remind him that back of the laboratory there is the man. I have a great deal of respect for the man who is really a doctor, and I do not believe that the laboratory is doing as much as we think it is doing. We have a group of men who are continually in the journals telling us what they find in the laboratory. I would like to say that we can have nephritis which is serious, which is chronic, which is undermining the patient, and no man can tell it from the examination of a specimen of the urine.

Ten years ago if any man said that he did not take the opsonic index of his patient we thought that man was not doing good practice. How much do we hear of that today? Give me the doctor who is not untrained, the man who knows something of the laboratory, but above that give me the man who knows something of the clinical symptoms, the relation of physiology and pathology and the relation between what is the matter with the patient and what he complains of.

I want to say a word in defense of the public. Dr. McAlester has said that 90 per cent. of the public

do not appreciate the doctor. In my experience, this is not true. Ninety-five per cent. of the public with whom I am associated appreciate the doctor and are willing to pay for his service. What they are afraid of, what they do dislike, and what does us no good is for them to employ a doctor who will sit in judgment on another doctor. They have not very much respect for our character when we come to pass judgment on our competitor, nor very much respect for our wisdom, and I do not know that I blame them for it.

DR. A. W. MCALESTER, Columbia, closing: I thank the gentlemen for listening to this outline. It is a matter that has been very close to me for a good many years. I tried to leave out everything that was personal from that report and only concentrate on one thing. I have no personal aim in the effort that I am making, but I feel that I have asked, for thirty-seven years, for the support of the medical department and have not received it. It is not for myself, gentlemen, that I have asked it. Many of you know the years that I have spent in the work, and the things that I have worked for, and you cannot charge me with selfishness. It is simply, gentlemen, for the sake of the on-coming generation that the people of the state of Missouri today and the men of the coming generation in the state of Missouri should support and manage a university wherein medicine might be taught in such a way that the position of medicine in our state would be a loftier one, whereby medicine should progress in our midst without any students going to a foreign university for that knowledge which by statutory law they should receive here. This Association is responsible, it has a responsibility in the matter, and it should work through the legislature of the state of Missouri for the protection of human life and the advancement of human rights against the foes of our existence—ignorance and disease.

DR. FRANK G. NIFONG, Columbia, closing: I have mentioned before that I sat at the feet of Gamaliel, and I have absorbed some of his ideas and ideals. I am an admirer of the Jeffersonian type, and I fancy that I have absorbed some of his ideas. Jefferson was the great founder of education in America, the university system, and he planned it so that we were to have higher education in all the branches, medicine included. That is a function of the state of Missouri, to give us medical education according to the ideas of Jefferson and according to this democratic people who believe in his ideas.

Now what has the state done? As you know, it has done practically nothing. We have not been living, but merely existing with a preparatory medical school—a half school. I believe we should have full medical education and I believe we can have it if we wake up. I do not speak as antagonistic to any proprietary or sectarian school. Let them be; they do well; but they do not fulfill the whole function of medical education in Missouri. There is a greater, larger plan than that; a larger ideal. They came in at the first and they came in to supply the lack of the state, but that does not mean that the lack of the state should continue.

There should be in the medical department of our great state university four departments. We should have in the first place, an undergraduate department where we would train our medical students to be medical men, as we have been doing. As a second department we should have great research laboratories with paid men in them to discover new truths for us and for the benefit of humanity. There we must have the collateral sciences that link up with medicine. We must, also, of course, have the best post-graduate work, because each of us needs to be reeducated in the rapid evolution of the practice of medicine. That need is indicated in the report Dr. McAlester has made to us. It is a thing of the utmost



importance, bringing to us the best ideas of the world and the best ideas of each other as we meet in a great postgraduate school.

But that is not all. The greatest need of all is to educate the whole population in the ways that we know it needs education. According to our old ideas and our old ethics, we cannot do this as individuals. As private physicians we are not allowed to do it, nor could we afford to do it because we are not paid and because our motives would be questioned, as they have been questioned for such popular lectures as we have made to the laity on medical subjects. No one can do it successfully but a paid body of men that our state shall employ who shall go forth to the crossroads school, to the county high school, to the schools of towns and villages and cities, to educate these children who are our chief hope, in the knowledge of the laws of health and the prevention of disease. It is then that we shall get the appreciation of the people; it is then that our motives will not be impugned; it is then that we shall receive our proper credit.

#### METHODS AND RESULTS OF EDUCATIONAL WORK IN THE CONTROL OF CANCER \*

F. J. TAUSSIG, M.D.  
ST. LOUIS

Since 1902 when Professor Winter of Koenigsberg, Germany, instituted a campaign of education among the women of Prussia regarding the early symptoms of uterine cancer, there has been organized with increasing effectiveness year after year a movement to induce the public to realize the necessity of early recognition and treatment. In practically every European country the movement gained headway until with the outbreak of the present war energies have been of necessity directed to other channels. In the United States sporadic efforts at educational work had been made in Pennsylvania, New York, and Maryland and also at the Barnard Free Skin and Cancer Hospital in St. Louis, but not until the formation of the American Society for the Control of Cancer in May, 1913, has it been possible to carry this on in an effective and comprehensive manner. With headquarters in New York, in charge of a very efficient executive secretary, Mr. Curtis E. Lakeman, branch organizations have been established in a large number of states in the Union and the importance of early recognition of the disease has been brought home to the general public in a most successful manner.

Let me enumerate briefly a few of the methods that have been employed for this purpose:

In the first place, the endorsement of the medical profession as a whole and of certain prominent special societies has been obtained. The American Medical Association through its Council on Health and Public Instruction has lent valuable assistance. The Congress of Sur-

geons of North America has also been helpful in this work. Among the earliest activities of the society was the holding of public meetings in a number of the larger cities. This was done less with the object of educating the public than with the hope of interesting a considerable number of our wealthier citizens in the financial support of the movement. Large public meetings have, on the whole, been tabooed because of the difficulty of presenting such a subject as this before a lay audience of varying intelligence and of both sexes. The organization and its branches in the different states have rather sought to have the subject presented at frequent intervals before small groups of persons, thirty to fifty in number coming from the same rank and of the same sex. Particularly those professions who are more apt to come in contact with sickness in their daily life such as nurses, druggists, social workers, teachers, etc., are instructed to recognize suspicious symptoms and, when they are present, are told to impress on the person the importance of an immediate physical examination.

The society has furthermore published several excellent leaflets stating in a concise form the nature of cancer, some of its early symptoms, and the necessity for surgical removal. The distribution of these leaflets has been accomplished in many ways. A considerable number have been distributed in connection with lectures and informal talks. The New York City Board of Health sent out many thousands of them to those on its mailing list. One of the large insurance companies sent out such a leaflet to over a million of its policyholders.

An effort has also been made to interest the departments of preventive medicine of several universities in the importance of the cancer educational campaign. Our own University of Missouri has been the first to respond in this movement by publishing an excellent bulletin on cancer which received wide distribution throughout the state. The state boards of health have in many instances been extremely active in their assistance; particularly has this been the case with North Carolina, Massachusetts and New York. Women's clubs have been especially interested in the campaign because of the greater prevalence of cancer among women.

Most important of all has been the cooperation of newspapers and periodicals. You are doubtless familiar with the articles that appeared in *Collier's* and the *Ladies' Home Journal*. What you may not have heard of is that through the special mailing list of the Society for the Control of Cancer and through the press bureau of the American Medical Association we have been able to reach about three thousand newspapers and magazines.

\* Read before St. Louis Medical Society, Dec. 11, 1916.

Twenty-five articles on cancer approved by the society have been utilized by them as editorials or in other ways. One of the most valuable of these articles was that on the radium treatment of cancer which did much to check the hysteria concerning this method that swept over the country two years ago.

Those of us who have been active in this educational work have felt reasonably certain that there were bound to be results, but to prove this in a concrete way was most difficult.

In 1911 Winter tabulated his figures in East Prussia and found a definite relationship between the number of early cases of uterine cancer that came for treatment and the activity of the educational campaign. The percentage of early cases was at first almost doubled. Then came a period of relaxation in the educational work associated with a diminution in the percentage of early cases followed in its turn by a more energetic educational campaign with a corresponding increase in the percentage of operable cases.<sup>1</sup> As far as I know, no investigations as to the results of educational work in this country have been attempted except by Bloodgood at Johns Hopkins who found a decided increase in the percentage of early breast and tongue cancers in the last five year as compared with the previous period.

In the last few years I have had the impression that we were getting a great number of early cancer cases in the gynecological service of the Barnard Free Skin and Cancer Hospital. Therefore I undertook to make a tabulation of all the cases of cancer of the cervix since the opening of the Hospital in July, 1905. I excluded all cancers of the vagina, body of the uterus or vulva, and also those cases of recurrent cancer of the cervix on whom a hysterectomy had previously been performed. Dividing the cases as nearly as possible into periods of three years each, we find the following interesting ratio:

	Total Dispensary and Hospital Cases	Oper- ated in Hospi- tal	Refused Opera- tion or Operated Elsewhere	Oper- able Cases	Percent- age of Opera- bility
July 1905 to Dec. 1907	18	1	1	2	11.1
Jan. 1908 to Dec. 1910	40	6	1	7	17.5
Jan. 1911 to Dec. 1913	40	6	1	7	17.5
Jan. 1914 to Dec. 1916	67	26	2	28	41.8

Of course the essential thing is not whether these patients were actually operated on by us but whether they came to us early enough for operation to be done. Hence, I have included, as you will see, in each of the four groups one

or two operable cases that refused operation or were operated on elsewhere. While I realize that it would be unwise to draw positive conclusions from this one series, they have unusual value because we can in this instance eliminate practically all other factors but education in explaining the increase. Since the opening of the hospital the gynecologic service has been divided between Dr. Gellhorn and myself, and both of us have maintained approximately the same views regarding operability of patients throughout this period. Nor was the marked increase of early cases from 1914 on associated with any change in the location of the hospital (the new hospital was opened in 1910), nor in the method of admitting patients, which has been the same. I feel, therefore, that we have in the rise of operability from 17.5 per cent. to 41.8 per cent. in the last six years concrete evidence of the decided value of educational work. No new method of treatment or improvement in the technic of cancer operations can show such a proportionate increase in the number of lives probably saved. To the skeptic, therefore, who looks on all this educational work as useless, I can say with more assurance than ever that we *are* getting results, and that by means of it we expect at least to double the number of lives saved from cancer.

Of course I realize the difficulties and dangers that surround this work. We are dealing with a subject far more complex than that of tuberculosis. The symptoms of cancer are not so clear cut, are more insidious in their onset; often they are of such a nature that they cannot be discussed in public print. Prevention of cancer is possible to only a limited degree as compared with the prevention of contagious or infectious diseases. Even in the early cases permanent cure is possible in only about half the number. Certain forms of internal cancer such as cancer of the stomach and liver, are as a rule beyond hope of cure even under close supervision. Nor must we forget the danger of producing a cancerphobia which may lead the patient into unscrupulous hands and unnecessary operations. And last, but not least, the surgical treatment of cancer should be undertaken only by skilled and experienced operators. Yet in spite of all the drawbacks those of us who have been interested in this educational work feel more than ever that if we approach the subject in a way to inspire confidence the good accomplished will exceed by far anything that has heretofore been attained in the reduction of cancer mortality.

731 Metropolitan Building.

1. Ztschr. f. Krebsforschung, 1911, Vol. 10, pp. 343-364.



## NEPHRITIS AND ENDOCARDITIS

## (A Case Report)

ORVILLE HARRY BROWN, M.D.  
PHOENIX, ARIZ.

Some lesson should be learned from the study of every new case. Now and again the lesson may be of sufficient importance to warrant the presentation of the information to others.

The subject of this study, a 16-year-old boy, was found by his parents during the third week of June, 1916, to have some noticeable swelling of the face. On June 19, an examination of the urine revealed that it contained 2.6 gm. of albumin per litre. On June 21 the boy was sent to the hospital and kept strictly in bed, though he protested that he felt perfectly well and could see no need of even going to the hospital. At this time inquiry was made as to the etiologic factor. The only finding which gave even a suspicion of what might be the original focus of infection was a reddish anterior pillar of the fauces. Only after being repeatedly queried as to soreness in the throat did the patient finally admit that one side of his throat had a suggestion of soreness in it.

On the assumption that the tonsil was the focus of entrance, hot packs were applied to the neck and local applications were made to the tonsils.

A blood examination on June 21 gave the following: erythrocytes, 2,488,000; white cells, 13,550; hemoglobin, 45 per cent.; large polynuclears, 70 per cent.; lymphocytes, 27.5 per cent.; large mononuclears and transitionals, 2.5 per cent. Two hundred cells were counted and no eosinophiles and no abnormal cells were seen. No abnormality of the heart was found at this time. His arteries were unduly palpable for his years.

The blood pressure registered 190 systolic and 110 diastolic. On the evening of his admission to the hospital his temperature was 99, pulse 70 and respiration 22. He was put upon a soft diet with a superabundance of carbohydrates.

During the first day in the hospital, fourteen hours only, he partook of liquids three times and urinated twice. During the second day in the hospital the output of fluids was 71 ounces, and there were two defecations.

In the third period of twenty-four hours the intake of fluid was 56 ounces, whereas the output was but 24 ounces; there were two defecations in this period.

During the fourth period of twenty-four

hours the intake of liquids was 74 and the output 81 ounces. There were two watery stools. On the afternoon of this day the patient was put into a hot pack for a half hour and he perspired freely. During these first four days he rested comfortably in bed and was apparently doing well.

On the fifth day he had six convulsions. These began without warning immediately after a good night's rest, in spite of continuous confinement to bed for nearly four days, good sleep at night, elimination of proteids from diet, fair intake and output of fluids, two defecations daily, free perspiration from hot packs on the evening before the onset of the convulsions, and sodium bicarbonate, orangeade, lemonade and infusion of digitalis during the three and one-half days of treatment in the hospital.

We were at a loss to account for this sudden turn for the worse. But upon thorough investigation we came to the conclusion that the one point at fault had been insufficient elimination by the bowels. Cathartics had been administered daily and the bedside notes gave the information that two stools occurred daily. On careful inquiry, however, we learned that the stools were hard and small in amount, evidently adding to, rather than decreasing the toxemia.

To control the convulsions seven doses of morphin of  $\frac{1}{8}$  gr. each were administered hypodermatically, four hot packs of about one-half hour each were given, and six  $\frac{1}{8}$ -gr. doses of pilocarpin were injected subcutaneously. Fluid was given at frequent intervals per both mouth and rectum, but most of that taken by mouth was vomited. Milk of magnesia given per mouth tended to allay the nausea and probably had some effect in bringing about some small movements of the bowels. During the day of the convulsions only a very few ounces of urine were passed, and this involuntarily, so that the exact amount is unknown. He was unconscious a greater part of the day, but toward evening, though he was extremely restless and nervous, he seemed to be rational. By having him take an unusually large quantity of liquid each day thereafter and by not allowing a day to pass without his having excessively free bowel movements, we successfully avoided any further signs of uremia.

Following the day of the convulsions the urine was bloody, the color at first being that of almost pure blood; but at the end of six weeks to two months the red color had disappeared. The disappearance of the red color was effected, however, only after the amount of water taken per mouth had been increased

from 30 to 40 ounces to 200 to 250 ounces per day. It seemed to us that the large amount of fluid which the patient was ultimately persuaded to drink had much to do with his recovery. It was a hard fight to get him to drink the large amount of liquid and probably could not have been done had not the nurse on the case been unusually capable. The first nurse had as much difficulty in persuading him to drink 50 ounces as the next one had in getting him to drink 200 to 250 ounces per day.

On July 5, ten days after the convulsions, an examination of the blood revealed 39 mgm. of urea nitrogen, 4.2 mgm. of uric acid, 3.844 mgm. creatinin and 0.176 per cent. sugar were present in each 100 c.c. of blood—the normal figures being 12 to 15 mgm. of urea nitrogen, 1 to 3 mgm. uric acid, 1 to 2.5 mgm. creatinin and 0.10 to 0.12 per cent. sugar.

On July 14 the urea nitrogen had decreased to 29 mgm., the uric acid increased to 5.0 mgm., the creatinin increased to 4.2 mgm. and the sugar decreased to 0.126 per cent. On July 31 the urea nitrogen had decreased to 19 mgm., the uric acid to 4.9 mgm., the creatinin to 2.5 mgm. and the sugar to 0.120 per cent.

The Wassermann test and the Hecht-Weinberg-Gradwohl test of the patient's blood on July 14 and again on August 1 were negative.

Toward the end of the first week of the patient's illness a mitral murmur was discovered. Later in the period of convalescence the heart showed dilatation and increase in rate and required digitalis to control it. The edema of the face and legs lasted for about ten days, disappeared under the administration of sodium bicarbonate and fruit juices, and returned no more. The patient was troubled from time to time during his illness with nausea and vomiting. The stomach seemed to be easily thrown out of normal functioning.

The temperature rarely reached 101° F., and usually was short of 100° F. in the afternoon and about normal in the mornings. The leukocytosis ranged according to weekly counts from 13,000 to 21,000. Repeated blood and urine cultures demonstrated the constant presence of streptococci hemolyticus in both of these fluids.

When the boy first came under my direction I assumed that the point of entrance of the bacteria into the body had been the tonsils. Shortly after the cessation of the convulsions we debated the advisability of removing the tonsils. Dr. W. M. C. Bryan was called in consultation and his opinion was that even though the tonsils may have been at fault in the beginning, there was no indication that they were playing any part in keeping up the disease.

On August 21 the temperature continuing around 99.6°, sodium salicylate, which had not been given because of its albuminuria-producing properties, was administered in 10-gr. doses every four hours. In the course of a few days the temperature fell to normal and continued at normal until an acute attack of tonsillitis developed on August 28.

With the acute attack of sore throat the abnormal temperature returned and the urine straightway became bloody again. The fever as well as the blood in the urine soon disappeared, and it was decided to have the tonsils removed at an early date. On September 16 the tonsils were extirpated. The streptococcus hemolyticus was cultivated from the center of the tonsils. The last reports, one month after tonsillectomy, are that the patient is apparently well, though he still has a trace of albumin in the urine.

Throughout the illness the blood pressure remained around 160 to 190 systolic, and 110 to 120 diastolic. In the later stages of the convalescence the lower figures usually obtained.

Sodium bicarbonate, orangeade, lemonade, etc., were given in liberal dosage throughout the illness. Sodium iodid and calomel were administered at intervals. Quinin was given for a time, but without effect upon the temperature.

#### SUMMARY AND CONCLUSIONS

This patient with nephritis and endocarditis had the streptococcus hemolyticus repeatedly demonstrated in his blood and in his urine, and at last in his extirpated tonsils. The inflammatory condition in the tonsils was sufficient to supply streptococci to the blood, kidneys and endocardium, though it was insufficient to produce a noticeably sore throat. A rapid improvement in the patient's condition followed the removal of the tonsils. There was an improvement in the character and appearance of the urine as he was persuaded to drink large amounts of liquid. The uremic state would probably have been avoided had we successfully produced free catharsis during the early days of illness. The fever continued, being but little if any abated, until the administration of sodium salicylate was begun. The use of alkalis caused the edema of the face and legs to disappear rather speedily, but had no appreciable influence upon the infective agent.

The acidosis edema of nephritis is probably an important part of the process; but it is also probable that an invasion of the kidneys by the infecting organisms is, however, of greater importance in some cases. The tests of the blood for the urea and other retention products are of prime importance in giving an indication of the imminence of uremia.



**SOME OF THE SECRETARY'S DUTIES AND  
HIS PART IN MAINTAINING AN INTER-  
ESTING COUNTY SOCIETY \***

J. F. ROBERTS, M.D.

BOLIVAR, MO.

Under the head of Powers and Duties of the Officers of the County Medical Society, section 3, chapter 3, of our by-laws, the secretary's duties are defined and stated fully. These duties are so numerous that I will not take your time to mention them all. They consist, in part, as you all know, of keeping and recording the minutes and proceedings of the society, keeping the charter and all papers and applications, with a list of names of all members and eligible nonmembers, with place of residence, date and place of graduation, and certificate of each which entitles him to practice medicine in the state. Also, he must see after collection of dues and attend to the financial part, making his annual report to the State Secretary. It is also expected of the secretary that he, with the president and vice president, make out a program for the succeeding meeting; see that each member is notified as well as supplied with a program in time, before the regular meetings; in short, the secretary is the general utility member of the county society.

Some one has said, "Show me your secretary and I will tell you what your society is." The secretary should know personally every physician of the county. The secretary should not only be a good, well informed physician with executive and business qualifications added, but should possess tact, good judgment, magnetism, be a good mixer, and have the ability to harmonize and conciliate any discordant element that sometimes comes up in society work. He should possess self denial and feel a deep interest in his professional as well as his society duties. Nothing should keep him from attending each meeting of the society short of serious sickness of himself or in his own family. He should feel and be willing to brave bad roads and weather for a dozen or more miles, though up all night with a hard case of confinement the night before, perhaps, in order to get to the society meeting. Nonattendance by the secretary, as all know, is calculated to detract very materially from the interest of the society and its future usefulness.

If he is accused of officiousness or trying to run the society by some disgruntled member,

as he may be, he should not become discouraged in duty well performed, but persevere, or if the meetings happen to be run, as some may imagine, a little loosely through no fault of his, let him be patient and strive the harder to secure more efficient work in the future meetings. He will, if worthy, be commended and appreciated by members of the society whose good opinions are worth having. The very members who do the least work and who contribute to the success of the society the least usually are the ones who do the most kicking and fault finding. I want to say here that in our society in Polk County, of which I have been secretary for ten years, there has been very little kicking or fault finding in any way. Complete harmony has been maintained in our meetings. Reverting again to some of the means by which the county secretary can add to the attendance of the society meetings, will say, first, by keeping a sharp lookout for new members of the profession who move into the county and corresponding with them as soon as located. He should solicit them, as well as all eligible nonmembers, for membership soon after they become located and their name secured. By the proper effort on the part of the secretary of the county society, most eligible nonmembers can be gotten into the society. Sending the names and addresses of such physicians to the State Secretary in case the local secretary fails, with a request to the State Secretary to write them and send them a copy of the State Journal will frequently influence such nonmembers toward joining the county society. In soliciting membership from such nonmembers, I find that the defense fund and feature of the State Society appeals more, perhaps, to the majority of physicians than any one thing. That they also receive the State Journal and become members of the State and A. M. A. will usually secure their application. If they are not so secured, I give them up as back numbers and dead ducks. No live, wide awake doctor will refuse to join his county medical society today, in this state where medical men are so well organized, and where such membership and organization means so much to the doctor. The true physician and member of the county medical society soon realizes, or should realize, that a member gets out of the society just about what he puts into it, and no more or less. To those who lag, who take no interest in their profession toward elevating it, or adding to the profession anything calculated to enhance the usefulness and standing of the

\* Read at Ninth Annual Meeting of Missouri Society of Medical Secretaries, Springfield, May 15, 1917.

profession, I would quote "Two Kinds of People (Doctors)," by Ella Wheeler Wilcox:

"There are two kinds of doctors on earth today,  
(Just the two kinds, no more, I say)  
Not the saint or sinner, for 'tis well understood,  
The good are half bad and the bad are half good,  
Not the rich or the poor for to count a man's wealth  
You must first know the state of his conscience and health,

Not the happy or sad, for these swift flying years,  
Bring to each man his laughter and to each man his tears.

No: the two kinds of doctors on earth I mean  
Are the doctors who lift and the doctors who lean,  
And where'er you go, you'll find the world's masses  
Are always divided into just these two classes,  
And, oddly enough, you'll find, too, I ween,  
There's only one lifter to twenty who lean!  
In which class are you? Are you easing the load  
Of overtaxed lifters who toil down the road,  
Or are you a leaner, who makes others bear  
Your part of the labor, and worry and care?"

In the second place, the program has much to do with the successful meeting of the medical society. As a member of the program committee with president and vice president, it usually falls to the lot of the secretary to arrange and have the program printed and sent out. The president and vice president usually in our county live a distance apart from the secretary, which often makes it inconvenient for the program committee to get together. Short, spicy papers and reports of interesting cases, with a limit as to time, usually add more interest than long ones. The discussions should be limited in time also. Programs for the whole year are much more preferable, sent out to each member at the beginning of the year. One or two weeks (not longer) before each monthly or quarterly meeting, as the case may be, the monthly or quarterly program should be prepared and sent out to all members, containing all other matters, such as clinical cases to be presented, social features, etc. In this way each member of the society has plenty of time to study the subject-matter in advance of the meeting so that he can discuss the same more intelligently. The beneficial results in this way to each member are very much enhanced. In our county society we try and distribute the subjects around to the different members, often having to draft some backward members who are slow to prepare a paper or even report a case.

Before each meeting and before the program is prepared in our society, the secretary secures by correspondence contributions from three to five members, by invitation, from adjoining county societies, who have kindly and willingly attended our meetings and read many interest-

ing papers. The nonresident members have assisted very materially in making our county meetings interesting and profitable. Our county society meets at four or five different towns in the county. Alternating in this way, the sacrifices, expenses, etc., are equalized between the members of the different sections of the county.

This brings me to the third subject which adds to the society's interest and often makes those doctors present feel that it is good to be there. I refer to the social part of the program. While our society has not looked after the social side as fully as many other societies, it has not been entirely neglectful. The members of the society always take lunch or dine at the hotel together. The resident members of the society pay the expenses of the same. Our meetings are generally held at the hotel, and in this way the society loses less time than if it met elsewhere. We have had some outdoor lawn picnics with the wives and members of the doctors' families invited. We are planning an open session with invited guests of eminence soon. Much good fraternal feeling is created by the social meetings. The doctor feels that he is taking a day off, as it were, and goes away from the society meeting refreshed and renewed in knowledge, with good will toward his competitor as well as his colleague. The little professional jealousies are dissipated and closer friendship established by such social contact.

In conclusion, I want to say that it is the duty of the secretary to keep the county society in close touch with the State Medical Association. The secretary should refer matters of importance to the State Secretary. He should be prompt in making his report, remittances, etc., and in every possible way help along the work of the state organization. He should send, after each meeting, a copy of the county society's proceedings, for publication in the State Journal, and cooperate in all matters, such as the suppression of quackery in his county, assisting vigilantly in every way possible the defeating of any vicious legislation, or helping along any worthy legal legislation beneficial to the profession in the state as a body.

---

Secretary Daniels has recommended to the President for appointment as assistant surgeons of the Navy 270 members of the Medical Reserve who have passed their examinations and qualified for appointment. Following is the list of those recommended from Missouri: Frank L. Kelly, Guy D. Callaway, Robert Mueller, Felix P. Keaney, John L. Shipley, Cecil M. Burchfiel, Thomas P. Brennan, Wm. W. Russell and Frank B. Wallace.



**THE JOURNAL**

OF THE

**Missouri State Medical Association****Address all Communications to 3517 Pine Street, St. Louis, Mo.**

AUGUST, 1917

**EDITORIALS****GENERAL MEDICAL BOARD AROUSING PHYSICIANS TO SERVICE**

The general medical board, Council of National Defense, authorizes the following:

The general medical board, a special committee of the Council of National Defense, was named some time ago by the Secretary of War, as chairman of the Council of National Defense, to organize the physicians and surgeons of the nation for service in the war.

The Council of National Defense, it must be recalled, consists of six of the cabinet officers and an advisory commission of seven members.

Dr. Franklin Martin of Chicago, secretary of the College of American Surgeons, is the member for medicine and surgery, and his colleagues on the medical board, as his committee is called, are forty-five of the best-known men in the profession.

With him on the board's executive committee are Dr. F. F. Simpson, chief of the medical section of the council; Dr. William F. Snow, assistant chief; William C. Gorgas, surgeon-general of the Army; William C. Braisted, surgeon-general of the Navy; Rupert Blue, surgeon-general United States Public Health Service; Col. Jefferson R. Kean of the Red Cross; Dr. William J. Mayo, Dr. Victor C. Vaughan and Dr. William C. Welch.

These men and Drs. Winford H. Smith, George H. Simmons, and Theodore Janeway, of the general committee, are spending all their time in Washington.

Drs. J. M. T. Finney, George W. Crile, George E. Brewer, Frederic A. Besley, Harvey Cushing, Richard Harte, Fred T. Murphy, Charles H. Peck, William S. Thayer, Joseph M. Flint, Richard P. Strong, Walker Young, and Jiel E. Goldthwaite, although abroad, are in communication with the board and giving information derived from observation or experience back of the battle front. Each of the remaining members—Biggs of New York; Binne of Kansas city; Brown of St. Louis; Davis of Philadelphia; Evans of Chicago; Eve of Nash-

ville; Flexner of New York; Huntington of San Francisco; Kahlke of Chicago; Landis of Cincinnati; Logan of Chicago; Edward Martin of Philadelphia; Charles Mayo of Rochester; McGuire of Richmond; Rosalie S. Morton of New York; Phelps of Washington; Royster of Raleigh; Ruffin of Washington; Squier of New York; Thayer of Baltimore; Van Lennep of Philadelphia; Walker of Baltimore; Wilbur of San Francisco; and Woodward of Washington is the chairman of a subcommittee made up of physicians, members of medical associations in their respective communities.

This general medical board meets in Washington every Sunday for the discussion of all subjects brought up by the subcommittees or by the members of the executive committee, and in this way the medical men of the whole country are represented in the Council of National Defense, and, by the reverse process, the general medical board learns the views and gains the support of the doctors and surgeons of the country.

A day of two after the meeting the executive committee discuss all matters and determine all questions that the members think desirable and necessary. At the next meeting of the council Dr. Martin presents all the matters that need its action, and he can do it with confidence, because the whole physician body is represented and speaking through him.

In relation with the War and Navy Departments the board's functions are advisory. It passes on the sanitary arrangement of the new cantonments designed for 600,000 men. The plans for water, food, drainage and housing must carry the approval of the board.

It has standardized surgical instruments and appliances. It has arranged for the special training, under Simon Flexner of the Rockefeller Institute, of surgeons in the Carrel method of treating wounds.

Some of its members now in France are sending here ideas which the board is developing to meet casualties and conditions that must come. It has suggested appropriate legislation to meet contingencies as they arrive. Among other things, introducing the bill to make health officers of states and municipalities members of the National Public Health Service Reserve Corps.

The general board has taken an active part in arousing doctors to join the Medical Reserve Corps of the Army and the Navy.

The medical men of the country through this board are united to preserve the health of the troops while training in camp, to safeguard the public health, and to care tenderly for the sick and the wounded stricken down "somewhere in France."

## END THE MONOPOLY ON SALVARSAN

From *The Journal of the American Medical Association* for July 21 we quote an editorial with the above caption, because it presents the status of this question so concisely that there is no need of further comment by us. The editorial reads:

"The Adamson Bill, known as the 'trading with the enemy act,' has recently been passed by the House of Representatives, is now before the Senate, and will doubtless be enacted into a law. One of its clauses confers authority on the Federal Trade Commission to grant licenses to citizens of this country to operate patents owned by enemy aliens. Physicians are interested in the bill primarily because it includes the salvarsan situation. The manner in which salvarsan has been supplied in this country has been so arbitrary and the prices charged so tremendously above the actual cost, that we should not be satisfied unless the monopoly is ended so that the drug can be supplied at least at a fairly moderate figure, and the old methods eliminated. It is to be hoped, therefore, that the Federal Trade Commission will not grant exclusive control—that is, exclusive license—to any one person or firm. To do so would simply perpetuate the old monopoly and the old conditions. England has adopted a law which, in principle, is similar to the Adamson Bill, and there several concerns have been licensed to manufacture the product. The same should be done here. The Dermatological Research Laboratories of Philadelphia announce that they can supply arsenobenzol at \$1.50 a tube, and that there is immediately available a supply sufficient for any demand that may be made. The same laboratories have announced also that in a few months they will be able to supply hospitals for \$1.00 a tube. Considerable responsibility rests on the Federal Trade Commission in this matter, for it is not only a question of monopoly, but also a question of scientific qualification and ability to make the product on the part of some who may make application. Undoubtedly the commission will secure the cooperation of the United States Public Health Service, under whose supervision these drugs should be manufactured no matter who shall be licensed to make the product.

## CASUALTIES IN THE MEDICAL CORPS OF THE BRITISH ARMY

We have received several inquiries concerning reports being circulated from certain quarters concerning the casualties among medical officers of the present war, the reports stating that large numbers of physicians have been

killed and wounded. The best answer to these reports is the comment published in a recent issue of *The Journal of the American Medical Association*, which we quote:

"There has been such an astonishing amount of misinformation, exaggerated and sensational statements, published in this country regarding the casualties among medical officers in the British Army that Col. T. H. Goodwin of the British Army Medical Service, now in this country, cabled to the British War Office for the actual facts. He received the following data: The total casualties among medical officers of the British forces, on the western front, from the beginning of the war to June 23, were: killed, 195; wounded, 707; died of disease, 62. Hence the total number of casualties from actual war injuries on the western front was 902, of which 195 were in killed. This is entirely different from some of the statements which have received wide publicity in this country—some even semiofficial in character—which have reacted to the detriment of the efforts to secure officers for the Medical Reserve Corps."

## MR. HOWELLS' VIEW

Some months ago *The Critic and Guide* published an interesting symposium on the physician. The opinions expressed by numerous laymen were on the whole a splendid tribute to the profession. Of the comments in journals, medical and nonmedical, we have observed none that contains such delightfully delicate satire, such broad understanding of the spirit that moves the sincere physician, and such earnest appreciation of the country doctor as that expressed by Mr. William Dean Howells in *Harper's Magazine*. We believe our members will enjoy reading Mr. Howells' tribute, and therefore we asked and have received permission of Harper Brothers to present Mr. Howells' comment in our JOURNAL. It is given herewith:

Within the present year (which is pretty contemporaneous for the slowly arriving Easy Chair in the mention of any event) a popular medical review has published a symposium about the faculty. We have found this such good reading that we wish to share some of our impressions of it with the devotees of this department, and to partake their pleasure in the honor paid, with little qualification, by people of so many other callings to what they seem mostly to think the highest calling of any. Not that there are no exceptions to the rule of praise from the authors, artists, actors, lawyers, journalists, politicians, clergymen, and the like; there are some who have their misgivings and own them, and oddly enough these are often ladies, literary ladies. But why should we say oddly? The sex has begun to do its own thinking about so many things that it should not surprise us to have it do its own thinking about doctors. It is only fair, however, to say that after condemning doctors for some things these critics are apt to end by



acquitting them for others, and they always seem to have a particular doctor in mind and not doctors in general. Perhaps one of the vividest of them best expresses the common feeling of women about them when she says, "I think there is nothing better than a good doctor, and nothing worse than a bad one," which is what most men would say of doctors, especially men born of women.

Some men who for different reasons have not taken part in the symposium do not make this distinction. They leave you to think that if there is any difference in doctors one is worse than another. Le Sage, the author of *Gil Blas*, introduces no good physician to counterbalance Doctor Sangrado, though there were probably more than one such at the time, and are now practicing medicine in Valladolid, in spite of the sweeping condemnation which Ford passes on all the doctors of the country in his *Gatherings from Spain*. But we do not have to go back to the seventeenth century for blame of the profession in literature; nothing could be severer than the censure, the doubt and scorn, which Tolstoy heaps on the medical savans in *Anna Karénina*, though indeed he is habitually distrustful and contemptuous of all scientists; and as for Mr. Bernard Shaw, what could be more jubilantly satirical than his treatment of the profession in *The Doctors' Dilemma*, or the voluminous preface to that comedy?

To be sure, Mr. Shaw's doctors are English doctors, and what American has ever been sick in England but wished he was safe in the hands of his family physician at home? Yet, having said this, and having remembered the nauseous bottles habitually prescribed by them, can one fail to recall some one of them who was as good as an American doctor, or even better? This other may have been Scotch rather than English, but there are odds even in American doctors. Their science, not to say inspiration, is of later date than we may like to imagine in our patriotic fondness. The pioneer practitioner in the West, if we may, as we must, believe one of those wonderful brothers who have established a world-renowned hospital on the shore of the northern Mississippi, was but a little advance on the primeval Medicine Man of the region, and was the by-word and mocking of the German physicians who had settled there. Yet it must be remembered that it was a Kentuckian of sixty or seventy years ago who first performed an operation denying and forever reversing the axiom that "to open the abdominal cavity was murder" and saving innumerable lives since by this effect of his courage and his faith in his divination if not instruction. In spite, however, of our feeling in our bones that American doctors are the best, there are probably Englishmen who when at all sick over here wish they were safe at home in the care of the village apothecary, or the local "medical man," or even a knight of three guineas a visit. There are New-Yorkers who distrust the skill of Boston, and Bostonians who know they would not have died in New York if they had only had a physician from Marlborough Street to see them through their pneumonia in the alien metropolis.

The great thing is the trust and honor we all feel for the physician at large. Few are now the satirists compared with those who once derided them, and if a vast cult has grown up to renounce them and match its prayers against their potions, there are even within this cult recognized Healers who hold the place of physicians, though they use no physic. We do not know how these manage in surgical cases, but their moral influence must be something of the sort we Unchristian Scientists feel when a doctor of our unfaith comes into the room and begins our cure before he has written a prescription, much less administered any medicine. The personal equation is the thing, as the ladies of the symposium are always

saying, when they affirm that they abhor or worship a doctor as he gets on their nerves or not, or as he is or is not a gentleman. If doctors are almost universally gentlemen because they were born so or because their noble Hippocratic oath has made them so, they are successful in virtue of that quality as much as by the potency of their drugs. They are far oftener philanthropists and martyrs than cads or brutes, though sometimes, though very rarely, they are snobs. One might not prefer them to come into one's sick-room at night in evening dress, as though always dressed for dinner, but this might be because one was not in good society. A doctor can never tell beforehand, and if he is one's old family physician one does not grudge him the effect of having just happened to have dined out. But no matter how he comes, how welcome he is when one has not the least notion what the matter is, and is only sure that the pain is something awful! The pain begins to go at the mere sight of the doctor, and if he assures you that it is merely functional and not organic you are ready to laugh, however it continues to hurt.

An almost miraculous thing in a physician is that he is not only immune from contagion, but that his celestial armor bears no taint from one patient to another. Quite possibly he is coming to your bedside from the sick-chamber of some most catching ill, but you do not take it from him, while some unconscious Typhoid Mary carries the fever from one kitchen to another and spreads it throughout the house. It is notorious of doctors how they expose themselves to the pestilences of the poor mostly for no fee, and then come to you, trusting to their passage through the open air to have blown them clean of the infection. How is it they do not carry measles, scarlet-fever, diphtheria, smallpox, from one house to another? Perhaps they do, but we never know it, and do not think of the danger we have run when we hear that they have died of the disease themselves. We only think of their self-devotion in giving themselves to those poor, whose best friends they are, and whose fees it is said we sometimes pay without knowing it.

In spite of the malign chances we welcome them to our own afflicted homes; but the nicest way is to visit them at their offices, where we go for a prescription, or to ask them what they think ails us, and whether it is merely functional and not at all organic. If it is merely functional we begin to laugh and crow in our relief and fall into one of those talks with the doctor which are the most relishing talks in the world. No other sort or condition of men talks half so well, so intimately, so wisely. The physician knows more evil of a kind which it is always so interesting to hear than a man of any other following. He can tell you more dreadful things of other men than any lawyer, preacher, or merchant ever imagined, but he keeps the secret of their identity from you under the lock and key of his Hippocratic oath. He can philosophize life as no other can, and he is merciful to human frailty in the proportion of his large and deep experience.

What an awful experience his experience is, compassing that knowledge which he cannot impart and can scarcely more than intimate to the one it most concerns on the bravest urgency, the most vital necessity. How can we ever joke about doctors, although they so often joke about themselves? How can we turn from this solemn view of them, from their wise, kind talk, and think of the dozen or half-dozen other patients in the anteroom whom we are keeping from their turn while we selfishly listen! Why do we not take our prescription and go, as in all decency we should? But we do not budge until the doctor himself stirs in his chair, and for shame's sake we start, though half an hour before we sat among those outsiders and inwardly cursed the babbling or dodder-

ing imbecile within, who was keeping us from our turn with the doctor. The best way, the only true way, is to have an appointment, and then, announcing ourselves at the house-door, go sailing through those ranks in the anteroom and coming to anchor in the doctor's own study.

For the time he is not *the* doctor; he is our doctor. It is the peculiar quality of him that he shall seem the sole property of each sufferer in turn, and shall be as entirely the physician of the pauper whose fee you may unwittingly pay, as he is yours. But what are we saying? In nine-tenths of the cases, or at least half, nobody pays the pauper's fee, and the doctor gives his time, his skill, and his very life as freely to the destitute as to the affluent. What other man does the like? The priest or preacher? Yes; but as one recusant in denying the claim of the symposium on him says, "The doctors are the real Doctors of Divinity and the Saints of the earth," and they outnumber all the other saints, who, it must be allowed, also exist and live and die for us.

A good deal of cheap mockery has always followed the failures of the doctor, and a ghastly merriment has attended his defeat by the enemy who triumphs over all at last. But none of those who have shared his failure, and draining the cup of fear, which he would fain have kept the cup of life, to its bitter dregs, are among those who jeer even at the idea of his defeat. The bereaved often turn more willingly to the doctor who has not saved their beloved than to another who has not lost them. They remember as their chief consolation that everything their doctor knew or could, he did, and after the first throes of anguish has passed they wished to believe that his best was the best there was. They wonder how he could have had the courage to tell them there was no hope, when they saw him fighting for them to the last, or to hint from the first that there was little hope to trust to. Then indeed he became their doctor, as we all feel our doctor to be ours, and gave himself night and day to keeping their hope alive.

One of the women who takes part so wisely in this symposium, and who perhaps speaks more wisely and justly than any other, reminds us of the sins of the patient against the doctor, and brings home to the guilty sufferer his blame when he has not done his part in the common enterprise of saving his own life. "At the best the most of us are bad patients, often perverse in following directions and nowise co-operative, as would be necessary in any other relationship where two parties are concerned. Often we are not long grateful even when our lives have been virtually given back to us." We are, in fact, shamefully passive when we are no worse. What angel wife has not had to struggle almost to shaking the suffering husband in order to make him take his medicine at the times the doctor has directed? What man has not shirked his bitter drops, or nauseous drugs, or, after taking them, has not kicked or thumped about in bed until given some water to wash the loathsome savor down? The facts are disgraceful to manhood, which it is impossible to respect under the circumstances. Parents are as bad as children would like to be, and the men are worse than the women; but, then, men are such cowards. The doctors are the saints of the earth, yes, but they must be well nigh driven to swearing when they reflect on the unworthiness of most of the people they devote their lives to.

It has long been known that there are odds in deacons, and doctors probably vary as much as deacons. Every patient has his preference in physicians, and we hope we may own without defense that we like American doctors better than any other, and after them Scotch. German doctors are not so bad as a pro-ally would now like to think them, and we have found Italian doctors who have practiced in America very conducive to recovery. It is much

in the favor of the English doctor that the English like them; and, now we think of it, we have never really died from one of their doctors. In Spain, where neither Hebrews nor Germans are acceptable to the national prejudice, we have found Austrian Jews wisely sanative, and in Paris we have recovered gladly under the science of French doctors who have practiced in California.

We may not safely allow a homeopathic or an allopathic leaning, and we are not going to do so. If it is a question of something acute or urgent, and you are feeling very rich at the time, you had better take your respiratory tract, for instance, to a specialist, and have him fend off the threatening gripe. There is something so absolute about a specialist, with his swabbing and spraying, and his smiling question of whether it hurts; and then if he fails you can always go to bed for a week in the care of your own family physician and spend a week there as usual in getting well.

The specialist is mostly, if not always, a city man, but his practice does not usually lie in the tenements where so many doctors give themselves for nothing to those who have nothing to give in return. But very likely (we do not really know) the specialist does his gratis good works in the hospitals; we may be sure that a specialist, as he is a doctor, gives himself gratis somehow or somewhere. No man who can afford him will wisely forego him, and he will not forego those who cannot afford him. He is the last word of medicine, the bright consummate flower of surgery. But while we are praising him, we are thinking of another type of doctor, just as devoted and perhaps as efficient numerically, for he probably has ten times as many patients as a specialist. We are thinking of the country doctor, whose life the reader will as readily think of. Who does not think of him in some neighborhood which, winter and summer, night and day, he blesses? He is as modern as the specialist in his way, and if he is like the one we are thinking of, he was graduated from a good school, and every year he gives out of his crowded time certain days or weeks for running up there, and renewing his lore in the society of those who know the last word of his science and who are willing to impart it, so that the summer visitor shall be as safe in the country doctor's care as in that of his own family physician, and the rustic sufferer shall have the benefit of all the modern drugs and ideas. The country doctor keeps them both at the command of his patients, and he puts up his own prescription from the hand-bag, which he bears when he arrives with the ideas shining from his face. He used to arrive in a buggy, but now he comes in a motor-car, which perhaps he drives himself, and which you hear snuffling before your door in the dark or daylight, and know before your bell rings, or his cheery voice sounds across your threshold. He brings health and the healing which will follow from his careful diagnosis. Very likely you are not very sick. Let us hope not; but, if necessary, he will examine your heart, and if you are in years he will take your blood pressure and will tell you that you have the arteries of an infant, or that your bronchia are as clear as a bell. He is an optimist, but if there is cause for anxiety you will know it from his suggestion that he will look in again in the morning, or that you can phone him if you are not better. Probably there is no cause for anxiety, and with the medicine he has left you begin to feel that you do not need any medicine, almost before the snuffle of his runabout has died on the outer air. There is no apothecary's charge for the drugs and the doctor's fee is a dollar, received with reluctance at the end of the summer. It may have been as richly earned as the specialist's fifteen, but this is not saying that the specialist's fee is not richly earned.



## OBITUARY

### LEONIDAS W. TANDY, M.D.

Dr. L. W. Tandy of Creighton died at the State Hospital for the Insane at Nevada, June 5, 1917; age 67 years. His illness was of short duration. He was a member of the Cass County Medical Society and the Missouri State Medical Association until 1917 and because of his failing mental condition and at the suggestion of his fellow physicians in Creighton he was placed on the retired list.

### ISAAH G. W. STEEDMAN, M.D.

Dr. Isaiiah G. W. Steedman of St. Louis, a graduate of Tulane University of Louisiana, School of Medicine, New Orleans, and one of the oldest physicians in St. Louis, died at his home on Waterman Avenue, May 15; age 82 years. He practiced medicine for a number of years but retired to take up a business career. He was a veteran of the Confederate Army during the Civil War. He was a member of the St. Louis Medical Society, Missouri State Medical Association and a Fellow of the American Medical Association.

### WALTER L. PURSSELLEY, M.D.

Dr. Walter L. Pursselley of Springfield, one of the pioneer physicians of that city, died suddenly at his home, June 21, following a seizure of apoplexy; age 51 years. Dr. Pursselley had been in ill health for some time, but had recently resumed his practice. He was born in Greene County and obtained his early education at the district schools and Henderson Academy. His medical education was obtained at the Missouri Medical College in St. Louis from which he graduated in 1894. Dr. Pursselley was a member of the Greene County Medical Society, Southwest Medical Society, Missouri State Medical Association and a Fellow of the American Medical Association, besides numerous secret orders.

## NEWS NOTES

DR. JAMES C. WELCH of Salem has been appointed physician to the State Penitentiary.

DR. J. L. EATON of Bismarck has been elected superintendent of State Hospital No. 4 at Farmington.

DR. CHARLES H. MAYO of Rochester has been appointed aide to Surgeon-General Gorgas of the U. S. Army.

DR. M. O. BIGGS, superintendent of State Hospital No. 1, Fulton, has been re-elected by the new board of managers.

DR. JABEZ N. JACKSON of Kansas City has been appointed a member of the general medical board of the National Council of Defense.

DR. H. DELAMATER, city health officer at St. Joseph, has begun a systematic campaign to exterminate mosquitoes in and about St. Joseph.

DR. WM. MAYO of Rochester has been commissioned major in the medical corps of the Army and assigned to active duty. He has been called to Washington.

ON the night of July 16, 1917, the offices of Drs. R. W. Smart and H. L. Kerr of Crane, Mo., located in the Bank of Crane Bldg., were destroyed by fire.

DR. R. K. OGILVIE of East Prairie has been commissioned Captain in the Medical Officers Reserve Corps and left for the front "somewhere in Europe" August 1.

THE Women physicians of Kansas City are seeking representation on the staff of the General Hospital of that city. The movement has the indorsement of the Women's Club and other organizations.

THE Western Roentgen Society held its semi-annual meeting at Kansas City, July 20 and 21 with headquarters at the Hotel Baltimore. Dr. M. B. Titterington of St. Louis is president of the society.

DR. H. G. MUDD of St. Louis has been commissioned major of the Home Guard, and will have entire charge of the medical officers. Major Mudd will appoint the physicians necessary to complete his staff.

THE Jennings self-recording test for the detection of color blindness, invented by Dr. J. Ellis Jennings of St. Louis has been adopted by the U. S. Government as the official color test for use in the Navy and Army.

DR. F. W. GALE, formerly of Marquand, has located in Bismarck, where he has taken over the practice of Dr. J. L. Eaton, who was recently elected superintendent of State Hospital No. 4. Dr. Gale also succeeds Dr. Eaton as division surgeon of the Iron Mountain Railroad at Bismarck.

THE next examination by the State Board of Health will be held at the Water Works Building, Kansas City, Mo., September 24, 25 and 26. Applications for the same should be on file with Dr. Geo. H. Jones, secretary, not later than September 15.

DR. FREDERICK HAGLER of St. Louis, former resident physician of the St. Louis City Hospital, who was in charge of the party of physicians stationed at Grudens, Germany, before the outbreak of the war between this country and Germany, has returned to his home in St. Louis.

DR. E. H. SKINNER of Kansas City has been appointed by the Surgeon-General of the U. S. Army to conduct a school of military roentgenology in Kansas City. Similar schools will be established at New York, Philadelphia, Chicago, Boston, Baltimore and Richmond. Medical officers of the Reserve Corps will be detailed to these schools for instruction in Roentgen-ray work. The course extends over a period of three months.

ARMOUR AND COMPANY announce the appearance of Pituitary Liquid in  $\frac{1}{2}$  c.c. ampoules. This enables the physician that prefers small doses of the posterior pituitary active principle to get the product entirely free from preservatives of all kinds. Pituitary Liquid is physiologically standardized, acts promptly when needed as an oxytocic diuretic or stimulant. Pituitary Liquid is in boxes of 6 ampoules, 65¢ for the  $\frac{1}{2}$  c.c. and \$1 for the 1 c.c.

THE members of the St. Louis Medical Society by post-card vote during the vacation season of the society have voted to care for the practices of members who have been called to the colors. Four hundred and seventy-one votes were cast and the majority of the votes favored returning 50 per cent. of the fees collected to the absent member or his dependents. The Barnes, St. Mary's, Deaconess and Jewish hospitals have offered the facilities of their institutions for taking care of the patients of the absent members.

DR. ISAAC H. JONES of Philadelphia delivered an address before the St. Louis Medical Society on July 21, on "Medical Aspects of Aviation; United States Army Standards." Motion pictures demonstrating the vestibular tests and other features of examining applicants for the aviation corps added much to the interest and instructive nature of the lecture. Although the society was in the midst of its summer vacation, a postal calling the special meeting brought out a large number of the members. Dr. Jones is Major of the U. S. Army in charge of the examination of recruits for the aviation corps.

DURING June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Borcherdt Malt Extract Company: Borcherdt's Malt Olive.

A. Klipstein and Company: Lipoiodine "Ciba."

Eli Lilly and Company: Pasteur Antirabic Preventive Treatment (Harris Modification).

Horace North: Citresia.

H. K. Mulford Company: Hay Fever Pollenin Fall-Mulford; Hay Fever Pollenin Spring-Mulford.

ON July 11, 1917, the Governor made the following state board appointments: Dr. W. A. Clark, Jefferson City, to take the place of Dr. F. H. Matthews of Liberty; Dr. T. W. Cotton, Van Buren, to take the place of Dr. G. O. Cuppidge of Moberly. The personnel of the board now is Dr. T. H. Wilcoxon, vice-president, Bowling Green; Dr. Geo. H. Jones, secretary, Jefferson City; Dr. W. J. Ferguson, Sedalia; Dr. T. A. Son, Bonne Terre; Dr. M. R. Hughes, St. Louis; Dr. W. A. Clark, Jefferson City, and Dr. T. W. Cotton, Van Buren. The meeting of reorganization has not been held, and at this time the president has not been elected.

THE following is a list of the Medical Boards in Missouri appointed to examine candidates for the Medical Officers Reserve Corps. The name and address of the chairman of the board only is given. Applicants should select the board most accessible to themselves:

Columbia: Maj. Mazyck H. Ravenel, Medical Reserve Corps, University of Missouri.

Jefferson Barracks: The surgeon.

Kansas City: Maj. J. F. Binnie, Medical Reserve Corps, Rialto Bldg.

Springfield: Capt. Joseph W. Love, Medical Reserve Corps.

St. Charles: Dr. Frank J. Tainter.

St. Joseph: Dr. Daniel Morton.

St. Louis: Capt. Wm. H. Luedde, Medical Reserve Corps, 311 Metropolitan Bldg.

THE St. Louis *Star* in a recent article on the investigation of the police slush fund, published a statement, based on reports from officials, that the American Medical Association fought the optometry bill in the State Legislature, and that the association raised a fund to maintain a lobby at Jefferson City.



The St. Louis Medical Society protests against reports to this effect. Officials of the Missouri State Medical Association have denied to the *Star* that such a fund was raised. The state organization says it has consistently opposed what the association believes to be bad legislation, but never has raised a fund to further such campaigns.—*St. Louis Star*, June 28, 1917.

THE National Committee for Mental Hygiene has created a subcommittee on furnishing hospital units for nervous and mental disorders to the United States Government, the project having been approved by Surgeon-General W. C. Gorgas of the U. S. Army.

This subcommittee, of which Dr. Pearce Bailey of New York is chairman, is authorized to secure the services of alienists and neurologists to be commissioned in the Officers Reserve Corps, Medical Section, and to serve in the neuropsychiatric units which are to be attached to the base and other hospitals of the military services of the United States. Further information will be given, and application forms sent to physicians qualified in this branch of medicine, on application by letter or in person to the National Committee for Mental Hygiene, 50 Union Square, New York City.

COURSES of instruction for young men of the Medical Corps of the Navy to equip them for high-grade work along special lines have been instituted in leading medical colleges in New York, Chicago and San Francisco.

Surgeon-General Braisted makes the following announcement:

"Reports received this week show that the general health of the Navy continues to improve, and conditions are very favorable at most of the stations and satisfactory at all.

"Hospital construction at the naval stations is progressing with great rapidity. Much more, however, remains to be done at New York and Boston and at new camps and stations. The establishment of the sanitary division of the Bureau of Medicine and Surgery, composed of expert members of the Public Health Service, bids fair to be a great help and will do much to secure careful attention to sanitary conditions at each point."

SURGEON-GENERAL GORGAS of the Army authorizes the statement that in spite of the numerous responses to the call for surgeons the Medical Corps has many vacancies, both in the reserve corps and in the regular service.

The Surgeon-General urges on the profession the country's need to fill these vacancies in time to secure ample training in the duties of the military surgeon and sanitarian.

Those entering the reserve corps serve for the war, while those who go into the regular

service form a more permanent connection with the Army.

Examinations for admission to the regular service are held on the first Monday of every month. Applicants for commissions should apply directly to the Surgeon-General, who will notify them of the conditions and designate the places for conducting examinations.

Those who wish to enter the Medical Officers Reserve Corps should apply to the nearest examining board.

REAR Admiral Braisted, Surgeon-General of the Navy, today issued the following weekly report of health conditions:

"The health of the Navy continues good. Reports from the fleets and various vessels operating independently are reassuring. Conditions ashore are generally very satisfactory, and at the larger training stations where the greater number of recruits are received fresh from their home surroundings such sanitary measures and precautions are in operation as to insure actually greater safety from contagious diseases for a great many of the young men than they could have in their own homes.

"A certain number of cases of communicable diseases can be expected incident to the unusual prevalence of these diseases in the country at large just now, but the strictest measures are constantly employed to prevent the spread of infection within naval stations themselves. In this respect results have shown progressive improvement since the early days of the war and the administration of the Medical Department is such that the Bureau of Medicine and Surgery is in constant, practically daily, touch with conditions in all naval districts. Telegraphic reports in case any unusual condition should appear in one of the naval districts permit the bureau to make immediately such dispositions of the medical force and sanitary officers in that district as the situation demands. Where needed, there are also specially equipped bacteriologists and other laboratory workers."

The Surgeon-General of the Army states that the health of all troops in the Federal service on this continent continues excellent.

THE new staff for the General Hospital in Kansas City appointed by the health board insures for the sick poor the very best service. The term is for one year. Each department will be directed by one member of the staff who shall be selected because of his seniority or efficiency of service. The appointments follow:

Surgical—Jabez N. Jackson, J. F. Binnie, Howard Hill, Herman E. Pearse, W. J. Frick, E. F. Robinson, Arthur E. Hertzler, Edwin Lee Miller.

Surgical, Old Hospital—John G. Hayden, R. H. Meade, B. A. Peerman, J. Park Neal.

Assistants—R. D. Irland, Frank R. Teachener, T. G. Orr, E. P. Hamilton.

Medical—Robert T. Sloan, F. M. Lowe, P. T. Bohan, Charles C. Conover, H. D. Hamilton, George H. Hoxie, Lindsay S. Milne, A. C. Griffith.

Medical, Old Hospital—Scott P. Child, J. Q. Chambers.

Assistants—Fred B. Kyger, Sam H. Snider, P. Owens, George F. Pendleton.

Obstetrics—Attending, George C. Mosher, C. A. Ritter, M. A. Hanna; alternate, A. E. Burkhardt, B. G. Hamilton, F. T. Van Eman, Dora E. Bowman.

Eye—Attending J. H. Thompson, Joseph Lichtenberg, A. W. McAlester; alternate, T. S. Blakesley, R. J. Curdy, J. W. Kimberlin.

Ear, Nose and Throat—Attending, D. L. Shumate, A. J. Lorie, Sam E. Roberts; alternate, John L. Weaver, A. C. Leonard, Virgil W. McCarty.

Pediatrics—Attending, F. C. Neff, Edward H. Schorer, R. B. Platte; alternate, J. B. Cowherd, H. C. Berger, H. S. Marsh.

Neurology—Attending, G. W. Robinson, A. L. Skoog; alternates, E. L. DeVilbliss, R. E. Castelow.

Genito-Urinary—Attending, F. M. McCallum, J. P. Henderson, W. A. Wilson; Old Hospital, Leon Rosenwald, Clarence Capell.

Dermatology—C. C. Dennie, W. S. McBride, R. L. Sutton.

Proctology—W. H. Coffey, S. B. Hibbard.

Orthopedics—Attending, Robert M. Schaffner, Frank Dickson, C. B. Francisco; alternate, Russell L. Hodge.

Tuberculosis—Logan Clendening, Frank I. Ridge.

Anesthetics—Isadore Anderson, Harold B. Hedrick, J. H. Lapp.

#### NEGRO DIVISION

T. C. Unthank, Superintendent

July 1, 1917, to Jan. 1, 1918:

Surgery—Assistant attending, W. J. Thompkins; alternate, W. H. Bruce.

Medicine—Assistant attending, J. F. Shannon; alternate, L. M. Tillman.

January 1 to July 1, 1918:

Surgery—Assistant attending, J. E. Perry; alternate, A. E. Walker.

Medicine—Assistant attending, Milton H. Lam-bright; alternate, C. A. M. Kane.

Obstetrics—Thomas C. Brown.

Eye and Ear—L. E. Bailer.

Diseases of Children—E. J. McCampbell.

Anesthetics—Thomas A. Jones.

Dentistry—T. C. Chapman, McQueen Carrion, E. C. Bunch, L. Shelton, C. E. Egleston.

Genito-Urinary—Attending, J. E. Dibble; alternate, T. A. Fletcher.

#### MEMBERSHIP CHANGES, JULY, 1917

##### NEW MEMBERS

G. C. Bates, Appleton City.

G. D. Dalglish, Osceola.

Virgil S. Dangerfield, Luray.

Benedict H. Edelen, Gorin.

W. W. Ellis, Marceline.

J. P. Green, Roscoe.

Albert S. Johnson, Wheatland.

Fred'k M. Johnson, Gorin.

Horace W. McKim, LaBelle.

George F. Pendleton, Kansas City.

John A. Powers, Warrensburg.

Chas. V. Stewart, Bolivar.

C. S. Stratton, Roscoe.

E. Watson Sullivan, Osceola.

F. G. Thompson, St. Joseph.

E. P. VanArdsall, St. Joseph.

H. K. Wallace, St. Joseph.

John B. Wann, Humansville.

Alonzo C. Ward, Osceola.

#### CHANGE OF ADDRESSES

Edward A. Albers, Sedalia to Kansas City.

W. S. Culpepper, Willow Springs to Ft. Logan, H. Roots, Ark.

Ellis Fischel, 5662 Waterman to 484 Lake, St. Louis.

A. T. Fisher, 12th and Brooklyn to 726 Lathrop Bldg., Kansas City.

F. W. Gale, Marquand to Bismarck.

Oliver S. Gilliland, Kansas City to Ft. Logan, H. Roots, Ark.

John F. Hardesty, St. Louis to Washington, D. C.

Rolla Henry, 2026 S. Jefferson to 3673 Folsom Ave., St. Louis.

Aloys S. Heithaus, 3427 Washington Ave. to 2919 Accomac, St. Louis.

Henry R. Hickman, 6204 Magnolia to 2916 Arkansas, St. Louis.

H. P. Kuhn, Kansas City to Fort Bliss, Tex.

J. W. Larimore, 2086 Westminster to 4418 Holly, St. Louis.

E. M. LeCompte, Willow Springs to Brookline Station.

L. A. Marty, 612 E. 9th to 100 Rialto Bldg., Kansas City.

Rignald H. Meade, Kansas City to Ft. Riley, Kan.

M. Mesropian, Chillicothe to 2902 Pratt St., Omaha, Neb.

John C. Morfit, 3524 Washington Ave. to 13 E. Jefferson Barracks.

Chas. A. Orr, Clifton City to Mendon.

Fred'k W. Shaw, Mt. Vernon to % Post Hospital, Ft. Leavenworth, Kan.

John R. Vaughan, 260 Skinker Rd. to 6204 Delmar Ave., St. Louis.

E. VonQuast, 515 Grand Ave. to 2544 Olive St., Kansas City.

E. F. Weir, Lemons to Purdin.

James C. Welch, Salem to Jefferson City.

#### DECEASED

Walter L. Pursselley, Springfield.

L. W. Tandy, Creighton.

On July 12 the State Board of Health met at Jefferson City and passed on the grades of the examination which was held at the Washington University Medical School on June 18, 19 and 20. A list of those passing the examination, failures and licenses by reciprocity follows:



Name	School of Graduation	Year of Graduation	Home Address
Abrams, Samuel Frank.....	Washington University .....	1917	St. Louis
Althaus, Carl Jacob.....	St. Louis University.....	1917	St. Louis
Andrews, Raleigh K.....	Washington University .....	1916	St. Louis
Apacible, Pedro .....	National U. Arts and Sciences.....	1917	Batangas, P. I.
Barlow, Roscoe Leland.....	St. Louis University.....	1917	Walshville, Ill.
Barnett, Cecil Ernest.....	National U. Arts and Sciences.....	1917	Bernie, Mo.
Barnwell, Roy.....	St. Louis University.....	1917	Creal Springs, Ill.
Barragy, Jos. Carroll.....	St. Louis College P. and S.....	1913	Mason City, Iowa
Beach, Charlie Abbott.....	National U. Arts and Sciences.....	1917	St. Louis
Bell, Edward .....	Meharry Medical College.....	1917	Chicago
Bennett, Commodore E.....	St. Louis College P. and S.....	1917	W. Frankfort, Ill.
Boehm, John David.....	St. Louis University.....	1917	Monett, Mo.
Brashear, Howard Conley.....	St. Louis University.....	1917	St. Louis
Brookes, Henry Spence, Jr.....	Washington University .....	1917	St. Louis
Brown, Wilbur Kenneth.....	Washington University .....	1917	Troy, Ill.
Brown, William Sidney.....	National U. Arts and Sciences.....	1917	St. Louis, Mich.
Burling, Wesley Morgan.....	College Med. U. of Ill.....	1916	Grand Rapids, Mich.
Burlingham, Louis Herbert.....	Johns Hopkins.....	1906	St. Louis
Casey, Elmer Barney M.....	National U. Arts and Sciences.....	1917	St. Louis
Clapsaddle, Clare Jury.....	St. Louis University.....	1917	St. Louis
Cole, Bid .....	National U. Arts and Sciences.....	1917	St. Louis
Cook, James Thomas.....	National U. Arts and Sciences.....	1917	St. Louis
Cooper, George Francis.....	National U. Arts and Sciences.....	1917	Kansas City Mo.
Copeland, Paul Richard.....	National U. Arts and Sciences.....	1917	Creal Springs, Ill.
Davis, Leo Lloyd.....	St. Louis University.....	1917	Colby, Kan.
Davis, Wilfred Arthur.....	National U. Arts and Sciences.....	1917	Findlay, Ill.
Dearing, Bradford French.....	St. Louis University.....	1917	Shelbyville, Ill.
Dewese, Everett Rollan.....	St. Louis University.....	1917	Butler, Mo.
Dahms, Gustave .....	St. Louis University.....	1917	St. Louis
Donahue, James Clifford.....	St. Louis University .....	1917	Plainview, Ill.
Dorris, Richard P.....	Washington University .....	1917	Jefferson City, Mo.
Downs, Ernest Boone.....	National U. Arts and Sciences.....	1915	Danville, Ill.
Eber, Carl Theo.....	National U. Arts and Sciences.....	1917	St. Louis
Ellis, Robert Roy.....	National U. Arts and Sciences.....	1917	Keenes, Ill.
Ellison, Robert Fulton.....	National U. Arts and Sciences.....	1917	Douglas, W. Va.
Ferris, David Patrick.....	St. Louis University.....	1917	St. Louis
Ferris, Jos. Leo.....	St. Louis University.....	1917	St. Louis
Gasser, Fred .....	St. Louis University.....	1917	Pierce City, Mo.
Gerson, Benj. Norton.....	National U. Arts and Sciences.....	1917	St. Louis
Goldman, Ahbrum Milton.....	Harvard Medical School.....	1917	Kansas City, Mo.
Gomien, Scott .....	National U. Arts and Sciences.....	1917	Colfax, Ill.
Haynes, Arthur Haislet.....	Washington University .....	1917	St. Louis
Heid, Lloyd Lewis.....	National U. Arts and Sciences.....	1917	St. Louis
Hethcock, Edw. Ebby.....	National U. Arts and Sciences.....	1917	Parma, Mo.
Homan, Jos. Shelby.....	National U. Arts and Sciences.....	1917	St. Louis
Johnson, Everett Wallace.....	St. Louis University.....	1917	Coffeyville, Kan.
Johnson, Grover Clayton.....	National U. Arts and Sciences.....	1917	Belle, Mo.
Johnson, Roy Walford.....	Chicago Coll. Med and Sur.....	1916	St. Louis
Jones, Don Paul.....	St. Louis University.....	1917	Lockney, Tex.
Kirby, Alexander Crump.....	Washington University .....	1917	Harrison, Ark.
Kleinschmidt, Clinton Chas.....	St. Louis University.....	1917	St. Louis
Koeing, George Hy.....	St. Louis University.....	1917	St. Louis
Kuhn, Hy. John.....	St. Louis University.....	1917	St. Louis
Leonard, Esther Edna.....	National U. Arts and Sciences.....	1917	St. Louis
Levin, Sidney Saul.....	National U. Arts and Sciences.....	1917	St. Louis
Lewis, Benj. William.....	St. Louis University.....	1917	St. Louis
Lockwood, William Edison.....	National U. Arts and Sciences.....	1917	Potts, Mo.
Lowenstein, Paul Steinberg.....	St. Louis University.....	1917	St. Louis
McClure, Thomas Corwin.....	National U. Arts and Sciences.....	1917	Dahlgren, Ill.
McMahon, Bernard John.....	St. Louis University.....	1917	St. Louis
McDonald, Frank Rudd.....	University Pennsylvania.....	1917	St. Joseph, Mo.
McKinley, Roscoe William.....	National U. Arts and Sciences.....	1917	St. Louis
McNally, Frank Powell.....	Washington University .....	1917	St. Louis
Maddox, Sidney S.....	Meharry Medical College.....	1916	Bexor, Ala.
Maness, Charles Edw.....	National U. Arts and Sciences.....	1917	Stella, Mo.
Maples, Floyd Herman.....	National U. Arts and Sciences.....	1916	St. Louis
Marks, George W.....	National U. Arts and Sciences.....	1917	Valley Falls, Kan.

Name	School of Graduation	Year of Graduation	Home Address
Mei ch, Hy. William.....	St. Louis University.....	1917	Manchester, Mo.
Meyer, Claude Bertram.....	National U. Arts and Sciences.....	1917	Buffalo, Mo.
Miller, George Hy.....	St. Louis University.....	1917	Cornwallis, Ore.
Moran, Michael David.....	Washington University.....	1917	St. Louis
Moreland, George Hulett.....	University Louisville.....	1917	Rich Hill, Mo.
Murphy, John Hy.....	John Creighton Med. School.....	1915	St. Louis
Murrell, Ralph Ellis.....	St. Louis Coll. P. and S.....	1917	Kirkwood, Mo.
Myers, George Marshall.....	Washington University.....	1917	St. Louis
Netherton, Earl Weldon.....	Washington University.....	1917	Gallatin, Mo.
O'Donnell, Hy. St. Clair.....	Washington University.....	1917	Lawrence, Kan.
Osborne, Francis John.....	St. Louis University.....	1917	St. Louis
Parker, Ray Howard.....	St. Louis Coll. P. and S.....	1917	Moscow Mills, Mo.
Parsons, Clyde Wallace.....	National U. Arts and Sciences.....	1917	Sweet Springs, Mo.
Peacock, Kenneth Cleland.....	Washington University.....	1917	St. Louis
Pecat, Harry Vincent.....	St. Louis University.....	1917	Perryville, Mo.
Pennington, Thomas Jackson.....	National U. Arts and Sciences.....	1917	St. Louis
Ramming, Herman.....	National U. Arts and Sciences.....	1917	St. Louis
Richey, Orville Grant.....	National U. Arts and Sciences.....	1917	Sumner, Ill.
Riley, George Lesley.....	St. Louis University.....	1917	Merna, Neb.
Robb, Edwin Flemming.....	Washington University.....	1917	Kansas City, Mo.
Rosenberg, Nathan.....	Harvard Medical School.....	1917	Kansas City, Mo.
Sale, Onal Arthur.....	National U. Arts and Sciences.....	1917	Granby, Mo.
Schumacher, Harry William.....	Washington University.....	1917	Altamont, Ill.
Scovern, Harold B.....	Jefferson Med. Coll. of Pa.....	1917	Carrollton, Mo.
Stadler, Stephen August.....	St. Louis University.....	1917	Rosedale, Kan.
Steinle, George Hy.....	St. Louis University.....	1917	St. Louis
Strauss, Arthur Edgar.....	Harvard Medical School.....	1917	St. Louis
Tate, Lloyd Lewis.....	National U. Arts and Sciences.....	1917	Parrish, Ill.
Telfer, George Avena.....	St. Louis University.....	1917	Litchfield, Ill.
Thurman, Jos. Lynn.....	St. Louis University.....	1917	Potosi
Tonelli, George Louis.....	National U. Arts and Sciences.....	1917	St. Louis
Tormey, Albert Robert.....	Washington University.....	1917	St. Louis
Urbanowski, Leon Vincent.....	St. Louis University.....	1917	Peru, Ill.
Vaughn, Arthur Nathaniel.....	Meharry Medical College.....	1917	Nashville, Tenn.
Veach, Samuel Jos.....	Barnes Medical College.....	1904	St. Louis
Vincent, Luther Edgar.....	Meharry Medical College.....	1917	Nashville, Tenn.
Walther, Roy Albert.....	National U. Arts and Sciences.....	1917	Waltersburg, Ill.
Wattenberg, John Edw.....	Washington University.....	1917	Berger, Mo.
Weathers, Bahnson.....	Washington University.....	1917	Bynum, N. C.
Welch, Hooper Winslow.....	St. Louis University.....	1917	St. Louis
Wilhelm, Otto Julius.....	St. Louis University.....	1917	St. Louis
Williamson, Maurice Rulon.....	St. Louis University.....	1917	St. Louis
Wilson, Virgil Randol.....	National U. Arts and Sciences.....	1917	Grant City, Mo.
Wood, James Ballance.....	St. Louis Coll. P. and S.....	1917	St. Louis
York, William Bransford.....	National U. Arts and Sciences.....	1917	Sarcoxie, Mo.
Zoglin, Nathan.....	National U. Arts and Sciences.....	1917	Kansas City, Mo.

One failure from Meharry Medical College.

One failure from St. Louis College of Physicians and Surgeons.

Two failures from University of West Tennessee.

Reciprocity Name	School of Graduation	Year of Graduation	Reciprocal State
Gillespie, Orville F.....	Loyla University.....	1913	Nebraska
Hickok, Harrison S.....	University Nebraska.....	1895	Kansas
Jackson, Dennis Emerson.....	Rush Medical College.....	1913	Illinois
Johnson, Oscar William.....	Meharry Medical College.....	1915	Tennessee
Leisure, Joseph S.....	Barnes Medical College.....	1908	Nebraska
Lewis, Elwood Wendell.....	Jenner Medical College.....	1914	Illinois
Nickoll, David Taylor.....	Northwestern University.....	1891	Iowa
Walter, David J.....	St. Louis College P. and S.....	1914	Texas
Walter, Isidor.....	St. Louis College P. and S.....	1909	Pennsylvania
Williams, John Robert.....	University W. Tennessee.....	1913	Maine
Wilson, Frank Norman.....	U. Michigan Medical School.....	1913	Michigan



## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH  
HAVE PAID THE STATE ASSESSMENT FOR  
ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.  
Webster County Medical Society, Dec. 6, 1916.  
Platte County Medical Society, Dec. 8, 1916.  
Cape Girardeau County Medical Society, Dec. 15, 1916.  
Livingston County Medical Society, Dec. 16, 1916.  
Madison County Medical Society, Dec. 17, 1916.  
Carter-Shannon County Medical Society, Dec. 20, 1916.  
Atchison County Medical Society, Dec. 26, 1916.  
Linn County Medical Society, Dec. 30, 1916.  
Clark County Medical Society, Dec. 30, 1916.  
Benton County Medical Society, Dec. 30, 1916.  
Chariton County Medical Society, Jan. 1, 1917.  
Schuyler County Medical Society, Jan. 5, 1917.  
Crawford County Medical Society, Jan. 9, 1917.  
Adair County Medical Society, Jan. 10, 1917.  
Dent County Medical Society, Jan. 10, 1917.  
Mississippi County Medical Society, Jan. 16, 1917.  
Camden County Medical Society, Jan. 23, 1917.  
Barton County Medical Society, Jan. 30, 1917.  
Scott County Medical Society, Feb. 13, 1917.  
Cooper County Medical Society, Feb. 21, 1917.  
Gentry County Medical Society, Feb. 28, 1917.  
Marion County Medical Society, March 1, 1917.  
Ralls County Medical Society, March 13, 1917.  
Perry County Medical Society, March 20, 1917.  
Ste. Genevieve County Medical Society, March 27, 1917.  
Reynolds County Medical Society, March 30, 1917.  
Polk County Medical Society, April 7, 1917.  
Pike County Medical Society, April 11, 1917.  
Howell County Medical Society, April 17, 1917.  
Cass County Medical Society, April 18, 1917.  
Sullivan County Medical Society, April 20, 1917.  
Ray County Medical Society, April 25, 1917.  
Taney County Medical Society, May 1, 1917.  
Vernon County Medical Society, May 10, 1917.  
Dade County Medical Society, May 12, 1917.  
Holt County Medical Society, May 14, 1917.  
Carroll County Medical Society, May 23, 1917.  
Pemiscot County Medical Society, June 6, 1917.  
Laclede County Medical Society, June 13, 1917.  
Johnson County Medical Society, June 27, 1917.

### NINTH ANNUAL MEETING OF MISSOURI SOCIETY OF MEDICAL SECRETARIES

Springfield—May 15, 1917

ADDRESS OF O. B. HALL, M.D., PRESIDENT OF THE  
SECRETARIES' SOCIETY

*Ladies and Gentlemen, Fellow Secretaries:* The grandeur of this occasion cannot be added to by anything that I might say. The effectiveness of any words that I might utter, I fear, has been dethroned by the ingestion of too much of this splendid repast. Therefore, even if some of you should be in a receptive mood, I am fearful that my utterances may miss the goal of successful achievement.

However, if I did not avail myself of this opportunity to offer a few thoughts with the hope of cheering us on to the battle front of professional life as soldiers of medicine to fight the great battles against disease and human infirmity. I would not be doing my duty as a man and a physician.

So if you can bear with me a few moments, I will endeavor to present a few optimistic views on the subject, "The Beauties of the Medical Profession."

It should not be a difficult task on such a splendid occasion as this, where all the good nature and kindly feelings are displayed on the surface, and the glad cheer of fellowship pervades the very atmosphere, to look on the sunlit side of that cloud which perhaps has been shadowing our professional pathway in the past.

Storms will come and the clouds will pass, but *we* as bright stars in the *heavens*, should shine on and on, reflecting still that greatest light, "*Our Profession*."

The somber drudgery of the every-day task should be forgotten in that splendid light of love for our fellowmen. As we become imbued with that desire to alleviate the suffering of frail humanity and uplift mankind to that higher plane of living, where the keys of a better world may be touched to vibrate the cords of life in a greater harmony with the Divine plan, our life's work will become a pleasure and our career will be a light unto the gloomy pathway of our fellowmen.

I think it is not too much to say at this time that I believe that the work of the medical profession is just as much a part of God's plan to maintain the human occupancy of His earthly kingdom, as is the sacred aims of motherhood.

In sickness, when the body is writhing with pain, and disease has gripped with fiendish purpose the weakened structures of mortal man, and the grim form of death stands with beckoning hands, the soul cries out in agony for *help* in this dreadful hour of need: the physician wakens to the call, and with trained skill and ample means at his command, administers at the couch of suffering until rest and quietude bespeaks for the angel of mercy.

When the crystal snows of winter are softened by the transforming elements of spring, and the rippling rivulets are wandering in their courses, endeavoring to fulfill their mission in replenishing the great rivers that go rumbling and tumbling over rock and precipice to feed the gigantic seas beyond, is symbolic of every word and act which has for its aims, uplifting and magnifying the cause of the true physician.

As the artist and poet can reveal but a small fragment of the grandeurs and beauty of the scene, as the rain and sunshine in its happy mingling descends to earth in springtime to arouse the slumbering forms from their winter's sleep, and cover the land with a verdured mantle and flowers to awaken in man a sense of the beautiful and to the sweetness in Heaven's arrangement, so all of our efforts and eulogies can but touch the string lightly that vibrates the praises of the good physician.

Let us for a few brief moments say farewell to the practical and more commonplace, and hail with glad tidings the sweetest and richest graces that cling about our imaginations with joyful songs, beckoning us into a brighter and more perfect sphere than man in his strife and struggle with daily life is prone to enter.

Behold the lilies with all their delicate tints. Inhale their sweet fragrance as it is wafted by gentle breezes into infinite space. Disdain not the rosebuds as they unfold their petals with the dawn to gladden our hearts through the toil and discontent of the busy day. Listen to the birds' song, as the clarion notes from their tiny throats echo their voices from the woodland and fill the stillness of the glad morn with music which defies the artist's touch.

View the precious stones and the golden yellow metal, with all their radiance and luster after they have passed the master's hand; behold the sun as it rises to kiss away the dews of the early morn; combine all the eloquence and the sweetness of the entire universe, and we will have but a small part of the elegance and beauty enshrouded in the soul and

body of man. Class separately soul and body if you will, but it is the combined product with which the physicians have to deal. Think as we can about the doctrine of evolution; take sides with Darwin and Spencer or against them. Believe the "Divine Book" as we may, our instincts teach us truly that generic man represents the highest form of terrestrial development, and that woman in a specific sense is the last, highest and best creation. With such a portion of God's handiwork is the physician called on to labor.

When affliction comes to rob the human heart of its wonted joy, and the dark clouds of despair are enveloping the soul with the mystic shroud of death, the sublime edict goes forth from the divinest sense of all men. Heal! Oh physician Heal! Touch the spring of living waters and allow life again to flow. A bright exit from this land into the land eternal, though glorious it may be to the one departed and even though there may be hope of a blessed reunion for the loved ones left behind, it remains to be said that there is no recompense for the physician who does not do his entire duty.

Surrounded by relatives and friends is the couch on which the sick child lies. The golden ringlets which were mother's pride and care have lost their radiant beauty. Life it seems has almost departed and the anxious parents have summoned the family physician. He comes now and with his trained senses examines the little one, and with an expression of satisfaction announces that his little patient has favorably passed the crisis of the disease and will probably recover. Long has been the fight and sharp has been the contest, but *victory* is the reward. The knowledge of having been the instrument in the hands of Jehovah to restore a precious blossom, is a *Pearl of Great Price*.

Plod on, Oh physician in thy course,  
Let not the commonplace o'ertake thee,  
Or hills and rocks enthrall thee  
From the boon that is thy due.  
A master mind must e'er become thee,  
All nature greet thee as her own.  
And at thy last earthly parting  
Awake thy soul to eternal bloom.

J. FRANKLIN WELCH, M.D.

*Mr. Toastmaster, Ladies and Gentlemen:* I will promise in the beginning not to burden you with a long speech. I think you have had eloquent speeches, almost enough to suffice you, but I wish to say this in Dr. Schluter's behalf. He has laid down a burden, but he has taken up a greater one, and I feel that we, as members of the Missouri State Medical Association, and especially the Secretaries, should rally to Dr. Schluter in every call that he makes.

When I look about me this evening I see the faces of gentlemen, Secretaries, with whom I had the pleasure of meeting a short time ago in their home societies, and I wish to take occasion at this time of thanking these gentlemen for the hospitable manner in which I was received, and the other Secretaries whom I did not have the pleasure of meeting in their homes, I wish also to thank for their support during my administration.

You will never know what I feel in meeting you, Brother Secretaries, until you fill the position that I am trying to fill at this time. I have gone about over the state, visiting the component medical societies considerably, and without a single exception I have found them in splendid condition, full of life and energy and with willing hearts. On every hand I have found them full of earnestness and free from malice and hatred. I attribute this more to the fact that each one of these societies has a good Secretary than to any other one thing connected with them. In each instance the Secretary has been a noble man, a

man who is performing his duty under all circumstances.

Just here I wish to say that when a local society finds that they have a good secretary it is not a good plan to rotate that office. It is all right to rotate the presidency—to let that honor be passed around; but when it comes to the secretary, when you find that you have a good man, a man who is interested in the work, who is zealous and earnest, keep him in the office. Brother Secretaries, I know you feel that is a hardship; I know you feel the duty should be shifted to some other shoulders and give you a rest; but let me implore you to keep that office and do the best you can for the sake of the medical profession. Furthermore, there is good in it for you, because a man who is faithful as secretary of his local society is easily in touch with the work over the state and he enjoys it.

Another thing: Suppose that you give up your office and some other gentleman is elected to the office who is not competent, who does not fill the office as you have done, but lets things go haphazard; the society runs down and everything goes wrong. Under such circumstances you soon become blue and disheartened, and finally, you will not leave the society but, you drop out and quit it anyway, and then you see the harm it does to you. Not only that, but when you drop out your example is worse than if a half dozen others fell away, because they are watching you. So I wish to insist that you Secretaries, when the time of election comes around and you are reelected, do not offer any objection, but take the office and stay with it for the sake of Dr. Schluter. He needs you. You are all good men and I know it.

Furthermore, suppose we trace this principle along a little farther—to the State Association. Suppose that we in our state affairs changed our secretary every year. What would be the consequence? Why, it would only be a short time until everything would be in a chaotic condition; we would have heads or tails to nothing; our society would run down; our journal would run down, and everything would go to pieces, because a man cannot get in touch with that office, I do not care how zealous he is nor how perfect he is in a business way, he cannot get in touch with it in one year's time sufficient to manipulate it like the man can who has been in it and is acquainted with it. And just here I want to say this in behalf of Dr. Goodwin (put some cotton in his ears): I have been connected with Dr. Goodwin for a number of years, first as treasurer and now as president, and I have yet for the first time to find Dr. Goodwin doing any other than what I thought was for the benefit and best interests of our Association. (Applause.) He and his able assistants work diligently all the time and their only thought is for the good of this Association and the upbuilding of that journal. (Applause.)

You know that for us to have a good State Association we must have good component societies, we must have harmony in the local societies. Show me a society in which there is malice and hatred and scorn and all things that go to make up that which is mean and hateful and bad, and I will show you a society that is continually giving the State Association trouble. Show me a society that is always ready to do the right thing, that is full of love and honesty and fellowship one for the other, and I will show you one that the State Association is always proud of and always looking on it as the Rose of Sharon.

Ladies and Gentlemen, there is something in the breast of man, we know not what it is, it is called "personal magnetism"; there is a something there that draws us together, makes us as one if we will. There is near the city of Washington, on a mound not far away, a building and in that building



there are various devices for measuring and for testing. You have but to pass the threshold of that building to see the grain of sand grown into the mountain, the inch lengthen into the mile, the burning taper become the roaring furnace and the heat of the distant star a cheerful fireside; and besides all this there is in that building a wonderful magnet—the largest and strongest magnet known to man. So strong is that magnet that you can lay a nail on your hand some distance away and it will snatch it from you; or you may close your hand over that nail and you will scarcely be able to retain it in your grasp. So powerful is that instrument, yet so delicate, that it is used in measuring the amount of magnetism in the waves of light.

So, Ladies and Gentlemen, each of you have a magnet within your breast, more powerful and more delicate than the one that I have described. The person who has had the most magnetism of all who have ever lived was none other than the Great Physician; and on one occasion, as you all will remember, he made use of this language: "If I be lifted up, I will draw all men unto myself." He was lifted up, and since that day and time He has been drawing men unto Himself. That is the kind of magnetism, Gentlemen, that we must be possessed of if we want to have good local societies and good state societies. When we allow that kind of magnetism to creep into our hearts and take charge of us, a brotherly love then is kindled. Then it is that we would be about our brother's business; then it is that we would be studying the interest of some other than ourselves, and selfishness will be gone from us. Then it is that we will be under obligations to no other than our brother.

Why should we live in the pessimistic valley of our lives? Why not climb on the mountain and enjoy the sunlight? Those of you who have traveled in the West and have seen the Rocky Mountains, or those who in the East have seen the Alpine heights, well understand that no man can attain from the foot of the mountain to its peak in one stride or in an airline, but that he must go in that zigzag way from one crag to another until by and bye he will ascend above the clouds on the mountain top. And so it is in building Christian, professional characters. We begin at the mountain's base and we go in the old, zigzag way from one obstruction to another, and again from one obstruction to another; but let us see well to it, Gentlemen, that each succeeding obstruction that we meet is a little higher up on the mountain side, and by and bye we will find ourselves on the mountain peak, far, far above the clouds, in the optimistic air of fellowship one with another.

With this magnetism that I have tried to describe to you tonight, Gentlemen, it is made easy for us all to live in love, in peace and in happiness together, and the poet well understood this when he said:

"Each life that fails of its true intent  
Mars the perfect plan that its Master meant."

#### WASHINGTON UNIVERSITY MEDICAL SOCIETY

Forty-Second Meeting—April 9, 1917

##### 1. EXHIBITION OF CASES.

##### A. A CASE OF ADAMS-STOKES SYNDROME.

—By DR. FRANK N. WILSON.

The following case of Adams-Stokes syndrome is reported because of interesting features shown by the electrocardiographic tracings.

Mr. M. R., a German cigarmaker aged 60, was admitted to Washington University Dispensary on

March 31, 1917, complaining of vertigo and syncopal attacks. He was first examined in the Neurological Division where it was discovered that he had a very slow pulse. He was transferred to Medicine and advised to enter Barnes Hospital for further study. His family history was unimportant. He had had mumps during childhood and "ague" and gonorrhea at 20. No history of other infections was obtained. He had never had rheumatic fever and denied syphilis. He had never indulged in alcoholic beverages or tobacco to excess.

Seven weeks before entering the hospital he suddenly fell without warning, while at work, and was unconscious for a period which he believes to have been less than a minute. He had been doing nothing unusual previously. He had two more similar attacks each a week apart and then after an interval of two weeks he had two attacks within forty-eight hours. One attack came on while he was standing conversing and one while standing at the washbasin shaving. None of the attacks followed exertion. All save one, which was preceded by very brief ill-defined sensations which he cannot accurately describe, occurred without warning. He was also troubled with vertigo on turning quickly, especially in the morning.

Physical examination showed the heart dulness to extend from 4.5 cm. to the right to 12 cm. to the left of the midsternal line. A soft systolic murmur was heard over the entire precordium but not transmitted beyond it. The second aortic sound was accentuated. The radial artery showed some sclerosis. The pulse rate was 36 per minute and inspection of the jugular pulse as well as polygraphic tracings showed that the auricles were contracting about twice as fast as the ventricles. The remainder of the physical examination as well as the laboratory findings were negative.

Electrocardiographic tracings showed complete heart-block with a ventricular rate of 33.4 and an auricular rate of 66.8. The ventricular complexes were abnormal in form suggesting those seen in marked left ventricular preponderance. Ventricular systole as measured by the R-T time was very long, measuring 0.6 second. The subcutaneous injection of  $\frac{1}{50}$  grain of atropin increased the auricular rate from 74 to 96 without increasing the rate of the ventricles. Moderate exercise increased the auricular rate from 75 to 120 and the ventricular rate from 34 to 40.9. The results of these experiments indicate that the ventricular pace-maker was not under the control of the extrinsic cardiac nerves. At times when an auricular systole was due shortly after the beginning of ventricular systole the auricular complex was inverted indicating the escape of a center low down in the auricles whose period was mechanically affected by ventricular systole.

The patient was also given a massive dose of digitalis and for several days following this showed a tendency to ventricular extrasystoles after exercise. These extrasystoles had a tendency to occur in groups so that on one occasion six extrasystoles occurred in succession at a rate of 214 per minute. It is interesting to speculate on the relationship of this tendency to multiple extrasystoles to the syncopal attacks which the patient had had.

##### DISCUSSION

DR. ERLANGER: I do not think that I can add anything to what Dr. Wilson has said. I would, however, like to ask him a question bearing on the point he made with regard to the variation in the auricular rate. I cannot tell from casual inspection of the records whether my question has any point to it or not. Dr. Wilson, with his knowledge of the time relation derived from a close study of the records, will have no difficulty in answering me.

In heart-block in man and in animals, when the

interval between ventricular beats is quite long and when there are from three to five auricular beats interposed between successive ventricular beats, the auricular rate usually accelerates between the ventricular beats. Immediately after a ventricular beat the auricular cycle is long, but the successive cycles gradually shorten until the next ventricular beat occurs, when again the auricular cycle lengthens. This particular type of variation in rate, I am inclined to believe, owes its origin to the action of the circulation on the inhibitory center in the medulla. This center is bountifully supplied with blood by each ventricular beat; therefore its tone then is relatively high, but as the circulation decreases in the interval between ventricular beats, the inhibitory tone diminishes and the auricular rate increases. My question therefore is, Can the change in auricular rate described by Dr. Wilson be explained on this basis?

DR. WILSON: I do not think that the effect of ventricular systole is delayed enough. It seems to me that the effect is mechanical; in fact, that there is a mechanical effect in this case as is shown by the ectopic beats, associated with some ventricular systoles.

DR. G. CANBY ROBINSON: The clinical features of this case are interesting. The man is in very good condition and hardly decompensated, and Dr. Wilson says that he has put him through some rather sternuous exercises. Except for the attacks of unconsciousness that he has had here, the man seems to suffer very little from this unusual derangement of the heart-beat.

DR. GEORGE DOCK: Another interesting clinical point about the patient, one worth observing by those who have not had the advantage of seeing such a case, is the very distinct double rate of the jugular pulsation. It is not exactly mathematically double, but on looking at it it does appear double. That is interesting in connection with a case mentioned by Stokes. In Stokes' book, among the several cases of heart-block described there, he mentions one in which he devotes several lines to the doubling of the jugular pulsation; and coming fresh from the reading of that chapter which I presented in the propedeutic clinic, I was struck with the vividness of Stokes' description of these cases and the interest it has now for every one who has the advantage of working with such cases in a much more accurate way than he could.

#### B. A CASE OF MORPHIN, ALCOHOL AND TOBACCO HABIT.—By DR. H. E. BUNDY.

Mrs. B., aged 28, had birth of first child at 13 years; was infected; given morphin; continued its use for six years; stopped habit herself. Has used alcohol for ten years. Three months prior to admission had pain in both feet, diarrhea with tenesmus and blood. Hands and feet became a reddish brown with desquamation. Began to use morphin hypodermatically, one dram a day. Has taken a large amount of alcohol, principally whisky, about a pint a day. Has used tobacco since the age of 8, principally cigarettes.

Given Lambert-Towne treatment in the hospital. Since this time the color of hands and feet has become normal and desquamation has ceased. About the thighs are many bluish areas 1 to 2 mm. in diameter, with scarring, sites of injections.

#### DISCUSSION

DR. GEORGE DOCK: Those who are not familiar with morphin scars, hypodermic scars, will do well to examine this patient. One sometimes finds them where they are not at all expected, and even in these Harrison-law days I imagine that there is still a good deal of the use of the hypodermic, so that everybody should have a familiarity with all the features of such cases.

DR. DREW LUTEN: This patient presented an interesting question in differential diagnosis. The somewhat reddened appearance of the hands, with the rough skin, pains in the legs, and diarrhea with a stomatitis, brought up, of course, the question of pellagra. I do not know whether Dr. Engman and Dr. Mook have observed the case in the last few days or not; I have not had an opportunity to ask them about it. But that question came up rather prominently. It was difficult to determine whether the pains in the feet were due to alcoholic neuritis, considering the amount of whisky that she had been taking, or were associated with the morphinism; also whether the diarrhea was a part of her morphinism, or a part of the symptom complex of pellagra. Whether she had pellagra and morphinism, or whether the whole thing was explained by morphinism, perhaps with the addition of alcoholic neuritis, was a question.

#### C. A CASE OF BRACHIAL PLEXUS PARALYSIS.—By DR. EDMUND BECHTOLD.

The history of this case is briefly as follows: The patient, a farm laborer, aged 39, came to the hospital complaining of "paralysis of right arm." The family history and past history are unimportant.

Present History: On Nov. 4, 1916, in an attempt to grease the belt of a machine, the patient's right sleeve was caught, carrying the hand and arm between the belt and pulley in such a manner as to cause a violent downward and external rotation of the arm; at the same time throwing the head and shoulders in opposite direction, striking head on the fly-wheel and causing immediate unconsciousness. He remained so for one hour and a half followed by delirium during which patient was told he complained of pain in forearm. The ulna was fractured and splints applied. These were removed in two weeks and plaster cast applied from below elbow to wrist and removed at the end of ten days. During this time the hand was blue and swollen. When cast was removed patient noticed there was no feeling in his hand, but from time of accident he was unable to move arm or fingers which he thought was due to ulna injury. One month after injury he was told that the trouble was due to a clot on left side of brain and that an operation here would give relief. This accordingly was done, however, with no benefit. Since then there has been a progressive wasting of the muscles of the arm and patient presented himself with the following conditions:

The neurological examination is unimportant except for right arm. There is an operative defect in the skull 5 cm. in diameter, over the frontal lobe on left side. There is a complete flaccid paralysis of the muscles of right arm including deltoid, supra and infraspinatus, pectoralis major and minor. The rhomboids and serratus anterior are intact since there is no winging of the scapula. To pin prick there is total anesthesia of the arm to above the elbow with a narrow band extending up to the shoulder on the lateral aspect. Response to cotton-wool corresponds to that of pin prick, except in several places on anterior surface, where cotton-wool is detected slightly within the area of pin prick anesthesia. Deep sensibility is completely lost over the forearm and there is no vibratory sense until elbow is reached, where it begins to be felt. Reflexes absent in right arm.

The differential diagnosis lies between a spinal root injury and a brachial plexus injury. A central lesion can be disregarded and there is not the deformity of Volkman's ischemic paralysis. The fact that the rhomboids and serratus anterior are active shows that the long thoracic nerve and dorsal scapular nerves are intact. The area of epicritic and protopathic sensation corresponds so closely here that little can be concluded from it; but in several places the protopathic



loss is greater than the epicritic loss, which, according to Sherrin, is characteristic of a root lesion. The difference between these two forms of sensation is, however, not marked enough to warrant a diagnosis of root injury, especially since the long thoracic nerve responds to the faradic current.

#### DISCUSSION

DR. E. SACHS: This case is interesting for two reasons. First of all, one does not in the adult very frequently see such a typical picture of a complete brachial plexus paralysis. You see there is absolutely no power here. His arm hangs limp at his side; he has no sensation here. One point that Dr. Bechtold did not mention, which is rather interesting, is that he has even lost his vibratory sense for a low-pitched tuning-fork on his bones; he gets no sensation until you get above the elbow. The deltoid muscle is gone; in consequence, his capsule is loose. The difficult thing in these cases usually is to determine exactly where in the plexus the injury occurs. If the rhomboids, as Dr. Bechtold mentioned, are involved, the scapula droops down in this way, and if the serratus magnus is affected it is difficult to test it. This man is rather thin, and we were fortunate enough to get the current directly over his nerve and obtain an electric reaction from the serratus magnus.

One point that Dr. Bechtold mentioned which is particularly interesting is that where the lesion is so high up the question arises as to whether the roots have actually been pulled out of the spinal cord. From the way this patient received his injury it might have happened that his whole plexus was ripped out of the spinal canal. That has happened in a few cases; we had a case of that sort a few years ago. According to Head, if the roots have been affected there is a band in which the patient can feel fine sensations—that is, epicritic sensations, not protopathic—an area in which he can feel cotton wool but no pin prick, in which he can feel slight changes in temperature but no gross changes. Right here Dr. Bechtold found something that suggested that, between this red and this blue line is a small area in which the patient can feel cotton wool, but does not seem to be able to feel a pin prick. That would suggest the possibility of a root injury, but it seemed to us that the fact of his serratus magnus and rhomboids both being intact would indicate the lesion was a little further down and actually in the plexus.

Another interesting thing is how differently some people seem to think the motor centers seem to be located. Here is the bone defect over the frontal region, fully 2 cm. in front of the motor area. Though I think we should all be careful about criticizing our colleagues, the other reason that I wanted to show the case is because this is to me one of the most ghastly examples of malpractice that I have ever seen. I do not think there is any third-year student who would not be able to tell that this patient had a peripheral lesion from the flaccid paralysis, loss of reflexes, and complete loss of sensation. It is, I think, a shocking example.

DR. DOCK: I would like to ask Dr. Sachs what he thinks should be done in this case.

DR. SACHS: The problem here is that after five months there is no recovery whatever. The only thing to do is to try to resuture the plexus. Probably, as in most of these cases, the paralysis is due to hemorrhage with scar tissue formation, and not to a complete severance of all the roots. There have been a number of cases in which there has been improvement, but in such a serious injury you cannot expect a perfect result. If you get partial return of function, that is the most you can hope for.

## 2. VENTRICULAR FIBRILLATION IN MAN WITH RECOVERY.—By DR. G. CANBY ROBINSON.

The interest in ventricular fibrillation as a disturbance of the cardiac activity of man has been centered about the rôle this phenomenon may play in causing sudden death. It has been generally accepted that when the human ventricles pass into a state of fibrillation, death is an almost immediate and an invariable consequence. Ventricular fibrillation can be determined definitely by means of electrocardiograms. The case reported is one in which three attacks of syncope occurred. These lasted about four minutes each. During one of the attacks, when the patient ceased to breathe, and when no heart sounds were audible, an electrocardiogram characteristic of ventricular fibrillation was obtained. The patient lived thirty hours after this syncopal attack, during which time numerous electrocardiograms were obtained.

The case is the first example of recovery from well established ventricular fibrillation that has been observed.

#### DISCUSSION

DR. ERLANGER: Dr. Robinson did not qualify his last statement, so I will have to contradict him and say that I have seen a case of recovery from fibrillation. It was a case that was being demonstrated to the class. The heart had been laid bare and the prediction made to the class that the heart would not recover from fibrillation. The heart did recover, much to the amusement of the class.

The remarkable thing about Dr. Robinson's case is that it is one of recovery in an animal (man) that has such a large heart. Dr. Garrey has shown that the difficulty of recovery from fibrillation increases with the size of the heart. The ventricles of very small animals, such as the rabbit or the cat, not infrequently recover from fibrillation. The ventricles of the dog recover so rarely that I felt safe in making the prediction just mentioned. The heart of the calf, with which I have had some occasion to experiment, has never in my experience recovered. Here we have a case in which the heart of a human being has recovered.

DR. DOCK: I would like to ask both the speakers whether the term "recovery," after all, is not figurative.

DR. ROBINSON, closing: Of course I used the term recovery to mean recovery of the heart from ventricular fibrillation.

In regard to Dr. Erlanger's remarks, I said "case," and being a clinician, I do not consider a dog a case. I too, have seen dogs recover from ventricular fibrillation.

## 3. AN EXPERIMENTAL STUDY OF THE EFFECTS OF URETERAL LIGATION.—By DRs. JOHN R. CAULK AND R. F. FISHER.

The authors report a patient who had both ureters ligated during a pelvic operation, and who had gone eight days without secreting a drop of urine and before becoming uremic, who had been allowed to go so long on account of the current idea that the catgut would loosen and the ureters would open up. A double nephrostomy was done, patient immediately rallied, secreted urine promptly and abundantly. Urine came through the bladder on the fifty-sixth day, both fistulas closed ten days later, and the patient at the end of two years is well.

They then report a series of experiments done on animals, which were conducted to show when catgut absorbs, the manner in which the ureter opens up and if the ureter remains open; also the immediate and remote effects on the kidney. No. 2 plain catgut was never absorbed before three weeks, the ureter never opened until the end of six weeks. By that time the kidneys have been entirely destroyed by

hydronephrosis or pyonephrosis. In the kidneys which were drained by nephrotomy and the drain kept in place until the ureter had opened up, the kidney was in good state of preservation. If the kidneys were not effectively drained and were not infected the result was always atrophy; if infected, pyonephrosis. All the ureters from two months to a year that were not associated with bad renal and ureteral infection were opened and some showed very slight evidence of scar. The ureters associated with bad infections showed stricture.

The authors believe that if a kidney can be drained within a few days and kept drained until the ureter opens below that the kidney will be preserved and that there will not be much stricture formation in the ureter. They believe this is the best surgical method to adopt in case of ligation; better than deligation of the ureter which is almost impossible under such circumstances; also better than uretero-vesical anastomosis, and certainly better than allowing the kidney to die without making an attempt to save it.

Microphotographs were shown demonstrating the various histological conditions.

#### 4. FURTHER OBSERVATIONS ON INITIAL LENGTH, INITIAL TENSION AND TONE OF AURICULAR MUSCLE.—By DR. ROBERT GESELL.

A quantitative study of the relation of initial length and initial tension of muscle fiber to muscular contraction was made.

Tension and volume changes in series of isometric contraction of the turtle auricle with progressively increasing and decreasing length of fiber, were recorded. No definite effect of initial tension on tension developed was demonstrable. This justifies plotting of tension developed against initial length of muscle fiber. Curves thus obtained show tension developed to be a linear function of initial length of fiber. In one case this relation held throughout a change in length of muscle fiber amounting to 498 per cent. Per given length of muscle fiber the auricle of the turtle with progressively decreasing length of fiber develops more tension than the same muscle with progressively increasing length of fiber.

The relation of this work to cardiodynamics, auricular tone and theories of muscular contraction was briefly discussed.

#### Forty-Third Meeting—May 14, 1917

##### 1. EXHIBITION OF CASES.

##### A. A CASE OF AURICULAR FLUTTER TREATED WITH A MASSIVE DOSE OF DIGITALIS.—By DR. G. CANBY ROBINSON.

The patient, a woman of 45, entered the Barnes Hospital on May 3, 1917, complaining of swelling of the abdomen, shortness of breath, nausea and vomiting, abdominal pain and a feeling of weight in the upper abdomen. She had always been a delicate child, and had always had shortness of breath and palpitation of the heart. She had "rheumatism" at 32, and at the time of the birth of her only child, a swelling in the neck appeared which has since been present.

Her present illness began four months before admission with weakness and abdominal swelling. Her pulse rate was 168 per minute two weeks before admission. On admission she presented a typical picture of cardiac decompensation, with cyanosis, marked enlargement of the heart and liver, edema of the legs and ascites. The pulse rate averaged 150 per minute, and striking alternation was present in the radial pulse.

Electrocardiograms revealed auricular flutter, the auricular rate being 300 per minute, while the ventricles responded to every second beat.

Digitalis has been shown to cause frequently a change in the auricular activity. After the use of the drug, the flutter has been replaced by fibrillation in many cases. In order to bring about this result, a massive dose of digitalis was given, 20 c.c. of a standardized tincture being administered according to the method advised by Eggleston.

In our patient a change from flutter to fibrillation occurred in less than three hours after the dose was administered, and therefore demonstrates the rapidity of action which may be obtained by the use of massive doses of digitalis. Various phases of the heart beat were recorded by electrocardiograms.

##### B. A CASE OF ANEURYSM WITHOUT SYMPTOMS OF ANEURYSM.—By DR. E. R. SCHMIDT.

The patient came into the hospital complaining of shortness of breath, palpitation of the heart and swollen feet. During the routine physical examination a very large outline of the heart was found and enlarged retrosternal dullness both to the right and left. On Roentgen-ray examination, plate showed heart greatly enlarged, with a shadow somewhat hazy at the base and outline difficult to make out. Within the shadow the arch of the aorta could be seen abnormally dilated. Fluoroscopic examination showed strong pulsation in both ventricles. Wide dense shadows of arches of auricles showed transmitted pulsations. The width of the shadow is greater than the width of the heart. There is dilatation of the aortic heart. Heart is displaced downward to the left. Patient has +++ Wassermann; date of his infection was about 1887. Patient has been a hard worker all his life.

##### DISCUSSION

DR. DOCK: The points of interest here are, in the first place, the very unusual outline of the middle part of the thorax. In the fluoroscope you can see the heart beating, corresponding to the lower part of this shadow, the lower curve; and you can see the arch of the aorta pulsating, a wide arch not only in the plate but also in the fluoroscope, but not looking as dense as one would expect an arch of that width to be. The most remarkable thing about it is that the lower right part of the shadow, which looks in the plate as though it might be an enormous aneurysmal sac, did not pulsate at all. There was no motion of any kind, not even the transmitted impulse that one might expect if it were a solid mass. So the condition is altogether obscure and the roentgenogram, to my mind, throws no more light on it than the symptoms and the physical signs; that is, we have here a case without symptoms of aneurysm, without physical signs of aneurysm, and with a plate that might be an aneurysm but from the fluoroscopic examination is, at any rate, a very unusual one.

##### C. TRANSIENT COMPLETE HEART-BLOCK WITH NUMEROUS STOKES-ADAMS ATTACKS.—By DR. FRANK N. WILSON.

Syncopal attacks are fairly common both in partial and in complete heart-block, but as a rule they do not occur with sufficient frequency in any given case to allow the cardiac mechanism during an attack to be graphically recorded. Occasionally, however, as in the case which I wish to report, the attacks are so numerous as to make this possible.

Mrs. N. M., an American housewife aged 46, entered the Barnes Hospital on May 10, 1917, on the advice of her physician. She complained of fainting spells, vomiting and pain in the epigastrium and back. Her family history was unimportant. She had had measles, mumps, and a number of attacks of



severe sore throat during childhood, but had been otherwise well until about ten years before when she began to suffer from palpitation and dyspnea, both of which continued up to the onset of the illness for which she entered the hospital. She had never had an attack of severe cardiac decompensation.

About April 8, 1917, she began to be troubled by hoarseness and pain in the epigastrium and back and took to her bed. At about midnight of May 9 she became nauseated and later unconscious with very feeble breathing. She had ten or twelve similar attacks during the remainder of the night and several during the next forenoon and at 1 p. m. she was brought into the hospital. At this time she was having a syncopal attack every one or two minutes. Each attack was preceded by cessation of the heart sounds and of the pulse. Shortly after the heart stopped the patient would become very cyanotic and dyspneic, her eyes would roll upward and she would be found to be unconscious. In the longer attacks there was some twitching of the extremities or of the whole body. After a period of from ten to twelve seconds the heart-sounds and the pulse would return and the patient would quickly regain consciousness.

Electrocardiograms taken at this time showed that between attacks there was complete auriculo-ventricular dissociation with a ventricular rate of 90 and an auricular rate of about 120. The attacks were brought on by sudden ventricular standstill which lasted from seven to eleven seconds. During the ventricular standstill the auricles continued to beat at their usual or at a slightly increased rate. At the end of the period the ventricles began to beat again at their former rate. This series of events was repeated every one or two minutes for a period of about one hour. The long periods then began to be interrupted by single beats represented in the electrocardiograms by abnormal ventricular complexes and finally the periods of ventricular standstill became shorter and the attacks of unconsciousness ceased. After about three and one-half hours the complete dissociation had given place to a high grade of partial block and this partial block gradually became less marked for the next three days so that on May 14 the cardiac mechanism was normal except that there was a prolongation of the P-R interval which measured 0.315 second. After this the improvement in conduction was less rapid but by May 25 the P-R interval had decreased to approximately 0.20 second.

Aside from the phenomena witnessed when the patient first entered the hospital, physical examination revealed little that was abnormal. There was no definite enlargement of the heart. The cardiac dulness extended 3 cm. to the right and 10 cm. to the left of the midline. On auscultation there was a blowing systolic murmur most intense along the left border of the sternum but clearly audible at the apex and transmitted to the axilla. There was no edema, ascites, or hydrothorax. The liver extended 3 cm. below the costal margin and there was slight general abdominal tenderness. The temperature reached 100.5 F. on the day of admission, but was normal thereafter. The remainder of the physical examination and the laboratory examinations including the Wassermann reaction were negative.

The cause of the heart-block in this case is not clear. The speed with which the block cleared up suggests that some acute degenerative process or some intoxication was responsible. The patient had been taking digitalin, five drops every 3 hours, for approximately one week before entering the hospital and it is possible that this played a part in the production of the block.

## D. CASE OF SITUS VISCERUM INVERSUS.

—By DR. N. D. McCORMACK.

This case is presented only because of the interest attached to its rather rare occurrence.

Patient is a boy of 4½ years, who was brought to the Pediatric Clinic of Washington University Dispensary for a minor ailment, which bears no relation to this condition.

Dextrocardia alone is somewhat more uncommon than true situs inversus. When the heart alone is misplaced, it nearly always has some other abnormality, but when the entire thoracic and abdominal viscera are transposed, the heart does not necessarily have any other abnormality.

This patient is a fairly well developed child. Head and neck are negative. Lungs are negative. Heart outline is as follows:

R.	I. C. S.	L.
1	2	
3.5	3	1.5
6	4	1.5
6.5	5	

No shocks or thrills are made out. Heart sounds are clear and distinct. No murmurs are heard  $P_2$  louder than  $A_2$ . Liver dulness begins in left side in the fifth interspace and extends to the costal margin. The edge of the liver can be distinctly felt at the costal margin in the left side. Stomach tympany is on the right side. The right testis hangs lower than the left. Patient is right handed. The Roentgen ray shows the heart on the right side, the stomach on the right side and the ascending colon on the left side and the descending colon and sigmoid on the right side.

## DISCUSSION

DR. G. CANBY ROBINSON: These electrocardiograms are merely confirmatory evidence. The first lead is exactly upside down; that is to say, it is just as though it had been taken from the left hand to the right hand instead of from the right hand to the left hand. It is just as though we had gotten our leads twisted. It is a very pretty example of the type of electrocardiogram that one obtains from a case of situs inversus.

## E. CASE OF RED NUCLEUS LESION.—By DR. ERNEST SACHS.

Patient began to have symptoms of headache, October, 1916. These increased in severity until March, 1917, when a complete right third nerve paralysis developed. Blood Wassermann and spinal fluid Wassermann negative. Paresis of the right leg, with some hypaesthesia. About a month ago, the patient developed a violent tremor of his left hand, which resembled in every way, that of paralysis agitans. It stops on volitional movement. There is a typical "pill rolling" movement as seen in that disease. Reference was made to the theory of Ramsay Hunt, who claims that the lesion of paralysis agitans is in the globus pallidus of the lenticular nucleus. Tremor similar to that seen in this case has been described in lesions of the red nucleus. The fact that the third nerve is involved which passes through the red nucleus indicates that that is the site of the lesion. A focal experimental lesion made in a macacus rhesus monkey was shown in which stimulation at the site of the lesion produced tremor of one arm. This supports the view as to the location of this lesion.

## 2. A QUANTITATIVE STUDY OF THE EFFECT OF DIGITALIS ON THE HEART OF THE CAT.—By Drs. G. CANBY ROBINSON AND FRANK N. WILSON.

When administered to patients digitalis produces certain changes in the cardiac mechanism, which have been demonstrated by means of the electrocardiograph. The experiments which we wish to report were carried out for the purpose of determining whether these effects of digitalis could be produced experimentally in animals, and if so, at what percentage of the minimum lethal dose they first made their appearance. We have also attempted to throw some additional light on the mode of action of digitalis by determining what changes in the usual results of our experiments occurred when they were modified by preliminary cutting of the vagi.

Cats were used in all experiments. The stock tincture of digitalis was first standardized by the method of Hatcher and Brodie so that the approximate minimum lethal dose could be calculated for each animal. The animal was lightly anesthetized with ether and a canula was inserted in the femoral vein. After the cat had been placed in circuit with the string galvanometer and a control curve obtained, the injection of the drug was begun. One-tenth of the calculated lethal dose of a 10 per cent. solution of the tincture of digitalis was injected every ten minutes. Several electrocardiograms were taken between each two injections. The experiment was continued until death occurred.

The analysis of the electrocardiograms obtained in ten such experiments permits the following deductions. Approximately one-quarter of the minimum lethal dose of digitalis is necessary to produce flattening or inversion of the T-wave of the electrocardiogram. Approximately one-half of the minimum lethal dose is necessary to produce a definite prolongation of the P-R interval and about three-quarters of the lethal dose is required to produce constant auriculo-ventricular dissociation. The prolongation of the P-R interval was usually gradual rather than sudden and it was accompanied by a gradual slowing of the heart rate.

In a series of five experiments the vagi were cut before the injection of digitalis was begun. In these experiments the change in the form of the T-wave occurred at about the same percentage of the lethal dose as in the earlier experiments. The gradual slowing of the heart rate and the lengthening of the P-R interval, however, did not occur or occurred to a much less marked degree. Complete dissociation appeared later than when the vagi were intact.

When the results of these experiments are compared with the clinical effects of digitalis, it appears that the latter correspond to the effects seen in animals after the administration of 30 or at most 40 per cent. of the minimum lethal dose.

### DISCUSSION

DR. G. C. ROBINSON: These experiments are, naturally, not as numerous as they should be and we are continuing the series with the vagi cut, and then hope to go on and make other modifications. For instance, we plan to study the effect of digitalis on the heart in cases that have been treated by diphtheria toxin. Then, we also want to find out how much digitalis it takes to change the electrocardiogram of a healthy, normal individual. That is a problem that will have to be worked out on ourselves and some willing volunteers. Of course, in giving large doses of digitalis, we do feel that we want to know where we stand; whether we are giving doses near the danger line. I believe these experiments are going to show us just where we stand, or approximately

so, in that regard. We hope also that these experiments may throw considerable light on the mechanism of the action of digitalis.

## 3. POST-OPERATIVE ACID INTOXICATION.—By DR. P. C. JEANS.

The acetone bodies of the blood were somewhat increased after operation in about two thirds of the children studied, the maximum amount being found in most instances about twenty-four hours after operation. The plasma carbonate was reduced in about two thirds of the cases, the greatest reduction occurring in most instances about twenty-four hours after operation. When more closely compared there was found to be no close relation between the increase of acetone bodies and the reduction of plasma carbonate. In most instances, especially in those cases in which the plasma carbonate was much reduced, the acetone bodies were entirely inadequate to account for the degree of reduction of plasma carbonate. The undetermined acid factor was apparently of much greater importance than the acetone bodies in the reduction of reserve alkali. The starvation incident to operation seems to play no part in the production of this undetermined factor.

### DISCUSSION

DR. ERNEST SACHS: I think this is a very interesting contribution and of great importance to the surgeon. I will not go into the chemistry of the subject, because I do not understand enough about it, but I would like to ask one or two questions.

First of all, is it absolutely certain that these symptoms are due to an acid intoxication? If I understand it correctly, there are increased acetone bodies in these cases. Must it be an acid intoxication that is responsible for these symptoms? I rather imagine that Dr. Jeans does not know or he would have told us.

In the second place, has he any suggestion as to how to counteract this condition? There is no more alarming condition seen, particularly in children, than this which he has described at the beginning of his remarks. The other term which is applied to this state, an entirely unfounded term, that of surgical shock, is merely begging the question. I would be very glad to know whether Dr. Jeans has any suggestion as to how to counteract it.

DR. ELLIS FISCHER: This brings up the old question of anesthetics, which I can never pass by without saying something about. It is simply another evidence, to my mind, of the dangers of anesthesia which are not commonly taken into consideration in giving an anesthetic. Dr. Jeans' work is exceedingly interesting in showing no difference between ether and nitrous oxid-oxygen. I would like to state that this acidosis as shown by the presence of acetone in the urine is found likewise in spinal anesthesia, no matter what the drug used may be; and that brings up another question: is it the ether or the nitrous oxid-oxygen or the operation itself which produces this acidosis? If Dr. Jeans has some thoughts on this question, I would like to have him speak of them. To show that this is a condition that exists not only in children, Keil, in the gynecologic clinic in Munich, found in a series of four thousand cases that ten cases died from symptoms of acidosis, as described by Dr. Jeans, making a mortality from this cause of one in four hundred, which I think is rather astounding.

DR. JEANS, closing: Dr. Sachs has asked, if I understood him, what is the cause of acidosis, if it is not the acetone bodies. Of course, that is something that is not very well known. However, work is being done on this problem. There is one very interesting thing which has been brought out, mainly that in



every case so far studied, in which there is a lowered calcium carbonate ratio, we have found an increase in the amount of non-protein nitrogen of the blood. That is as much as I can say as to facts. One is led to theorize considerably farther. We cannot help comparing the condition to retention, such as we find in nephritis. These symptoms of bounding and flush may be related to retention of nitrogenized products, and the unknown acid factor may be phosphorus retention, such as we find in nephritis. These things we do not know as facts. That we do know non-protein nitrogen is retained is of considerable interest, as pointing the way we should go.

As to Dr. Fischel's questions, there are many theories and very few of them proven. I do not know much about any of them.

#### 4. THE COMPLEMENT FIXATION FOR TUBERCULOSIS AND SYPHILIS IN 100 UNSELECTED CASES FROM THE TUBERCULOSIS CLINIC.—By Drs. GEORGE IVES AND J. J. SINGER.

From the reports of Miller and Zinsser, Craig, Besredka, Petroff and others on the complement fixation test for tuberculosis, it would appear that this serological test has been proven of great value as a diagnostic factor in tuberculosis. The writers made observations in 100 unselected cases from the tuberculosis clinic to determine, if possible, its value. Our cases were examined in the usual way, comprising complete history, physical examination, roentgenological examination in most cases, sputum, pulse, weight and temperature records. Cases were classified as clinical pulmonary tuberculosis, tuberculosis suspects, and under other diagnoses. Clinical tuberculosis included those cases showing definite pathological physical signs, history and roentgenological findings, which have had toxic symptoms at any time within the past three years; under suspected tuberculosis, those cases with indefinite history and signs.

The results are as follows: 59 clinical tuberculosis, 55 or 93.2 per cent. gave a positive complement; 4 clinical tuberculosis, 4 or 6.8 per cent. gave a negative complement; 27 tuberculosis suspects, 10 or 37 per cent. gave a positive complement, 17 or 63 per cent. gave a negative complement; 14 other diagnoses, 1 or 7.1 per cent. gave a positive complement, 13 or 92.9 per cent. gave a negative complement. Clinical tuberculosis—40 negative sputum, 38 or 95 per cent. gave a positive complement, 2 or 5 per cent. gave a negative complement. Clinical tuberculosis—19 positive sputum, 17 or 89.4 per cent. gave a positive complement, 2 or 10.6 per cent. gave a negative complement.

One can draw the following conclusions from the above:

The complement fixation in tuberculosis is positive in practically every case of clinical tuberculosis, and that a positive complement means activity but does not denote the degree of activity.

A Wassermann test was done on every case with the following results: 23 per cent. of the total number of cases gave a positive Wassermann and 28.8 per cent. of the clinical tuberculosis cases.

Conclusions drawn from these figures are:

1. That syphilis is very common in tuberculosis in clinic cases.

2. That syphilis may be a predisposing factor in the development of tuberculosis.

#### DISCUSSION

DR. IVES: I might say that the essential thing in all the complement fixation tests is the antigen. Nearly all the workers have used different antigens in the complement fixation tests for tuberculosis. I think so far as our work goes that the work of Petroff was necessary, in that his work makes possible the isolation

of virulent tubercle bacilli from the sputum. Now the antigen which I used was prepared most carefully; the technic of the preparation will be given in a later paper.

DR. SELIG SIMON: Through the kindness of Dr. Ives I have been running a series of complement fixations on some nineteen unselected cases. Some of them were definitely tuberculous and others were not. I will not enter into details concerning the patients this evening. The interesting thing to me was this: In an article by Miller, I believe, the author brought out very strongly the fact that patients who show tubercle bacilli in their sputum still have negative complement fixation, and that something I found in my cases in which Dr. Ives made his complement fixation. There were two patients with bacilli in their sputum who had negative complement fixation, and I spent considerable time in going over those slides in order to satisfy myself of the correctness of my findings. In both cases there are unmistakable tubercle bacilli in the specimens. Those patients on physical examination and as regards their temperature, pulse and respiration do not show evidence of tuberculosis. They were sent to the institution where this work was done as phthisic individuals, but their complement fixation was negative and the tubercle bacilli were found in the sputum. Miller maintains and, of course, these two cases seem to bear out his contention, that there are such individuals as tubercle bacilli carriers, who show no evidence whatsoever of tuberculosis—that is, of an active tuberculous infection.

Another very interesting thing about the complement fixation tests was that a patient who was under observation for about six months and who showed no evidence of activity demonstrable by temperature, pulse or respiration, sputum or physical examination, had returned a two-plus complement fixation. We had thought until we received our report from Dr. Ives that in all probability the disease had at this point been arrested. We thought his condition was probably quiescent. When we got Dr. Ives' report, we became somewhat apprehensive about our opinion, and last Friday this patient had a hemorrhage in which he lost about four ounces of blood; undoubtedly a pulmonary hemorrhage. So if it had not been for the restraining influence of the positive complement fixation, we would probably have gone wrong in our opinion about this patient's condition. It that particular instance, there is no doubt but that the complement fixation led us to be more cautious in regard to the exercise permitted the patient.

DR. SINGER, closing: I only wish to make one statement. There may be some criticism in regard to our classification. The reason that we have been following this classification is because the complement has worked so nearly parallel to our classification that we felt justified.

#### 5. A STATISTICAL STUDY OF THE CAUSES OF ABORTION.—By DR. G. D. ROYSTON.

The study of 164 consecutive patients with a history of abortion was carried on as follows:

1. A detailed history was obtained in person.
2. Pelvic examinations were made, frequently under a general anesthetic, and microscopic examinations when necessary.
3. A Wassermann blood test and a functional kidney test with phenolphthalein were made in every case.

The results of these studies were given in the form of tables. The frequency and effects of induced abortion were considered in detail. References from the literature were freely given and the writer flatly denied the claims of Trinchese as to the influence exerted by syphilis on abortion occurring during the

first three or four months of gestation. The author shares the view of most obstetricians who hold that clinical evidences are found in less than one half of the cases of undoubted syphilis in women. He advocates a routine Wassermann reaction on all obstetric-gynecologic patients; nearly one third of his entire material was syphilitic and in 78.3 per cent. there was latent syphilis. As a result of the study of his case reports, the author draws the following conclusions:

More than 20 per cent., probably over 25 per cent., of all abortions are induced. Sixty per cent. of all induced abortions result in permanent sterility. Abortions induced by midwives, the patient herself and the physician rank in danger in the order named. Married state, church affiliations, nor the fear of ill health will deter a woman once determined to interrupt pregnancy. A positive Wassermann was obtained in 28 per cent. of all abortions in this series. Less than one third of syphilitic women give any history of physical signs indicative of the disease. Only by a routine Wassermann test can syphilis in the obstetric-gynecologic patient be detected.

Syphilis interrupts pregnancy at any and all periods of gestation. Syphilitic women abort in more than 60 per cent. of all their pregnancies. A renal deficiency interrupts pregnancy only in the event of a renal decompensation which is often amenable to treatment. Pregnancy may be interrupted as a result of renal deficiency at any period of gestation. Extra-genital factors can produce abortion and must be investigated if subsequent interruptions of pregnancy are to be prevented. Sixty-five to 90 per cent. of all women who have aborted will show some pathologic lesion in the pelvis.

A poor state of nutrition influencing an interruption of pregnancy is usually secondary to a more important underlying condition, as syphilis, impairment of the heart, lungs, or kidneys.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, June 6, 1917, with twenty-three members present. Dr. Floyd Spencer was in the chair. The minutes of the previous meeting were read and approved.

A number of bills were presented and warrants ordered drawn on the treasury.

A committee appointed by the president consisting of Dr. C. H. Wallace, Dr. C. R. Woodson and Dr. E. S. Ballard, presented the following resolution, which was read, ordered spread on the minutes and a copy sent to the family and to the daily newspapers:

WHEREAS, God in his providence has seen fit to remove by death, Dr. L. A. Todd, from our midst, be it

*Resolved*, That the Buchanan County Medical Society record its regret and sorrow at the taking off in the zenith of a most useful career. In his death this society and the medical profession loses one of the most brilliant and talented members. Dr. Todd was gifted with native talents, much above the average man. He had had the very best educational advantages this country offered and he had used them to full value. As a surgeon, his judgment was most excellent, his mechanical skill of the highest type. He had a personal magnetism and charm of manner possessed by but few men. It was these elements that drew about an unusual number of fast and true friends. A useful, high minded citizen and a thoroughly equipped surgeon has passed away.

*Resolved*, That this society in respect for his memory adjourn this meeting at the conclusion of its routine business.

Applications for membership in the society were made by the following physicians: Drs. F. G. Thompson, H. H. Francis and E. P. Van Arsdall. The applications were referred to the board of censors for their investigation.

The Committee on Permanent Headquarters, through Dr. Kenney, made their report and was ordered discharged.

Dr. Caryl Potter gave a very interesting report on the papers he heard read at the meeting of the Missouri State Medical Association. Two clinical cases of brain abscess were reported, one by Dr. Kenney and one by Dr. Dandurant.

The meeting adjourned in respect for the memory of Dr. L. A. Todd.

#### Meeting of June 20

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, June 20, 1917, with Dr. Floyd Spencer in the chair. There were fifty members present.

On motion the minutes of the previous meeting were dispensed with and the privilege of the floor was extended to Dr. Dunn, who gave a highly interesting talk of his hospital experience in Germany, Austria, Italy and the war zone in general. A vote of thanks was tendered Dr. Dunn on conclusion of his talk.

The following applications for membership, having been duly indorsed by the Board of Censors, were voted on and elected. Drs. H. H. Francis and E. P. Van Arsdall.

The application of Dr. F. G. Thompson for membership was, on motion of Dr. A. L. Gray, seconded by Dr. Farber, balloted on and the doctor was duly elected.

It was with great pleasure that the society received and accepted Dr. Woodson's invitation to open up the fall session in September at the Woodson Sanatorium.

A highly interesting paper illustrated by skyographs was delivered by Dr. A. B. McGlothlan, subject, "Some Observations of Bone Joint Lesions," and a vote of thanks was tendered Dr. McGlothlan for his scholarly and instructive lecture.

There being no further business before the society, the meeting adjourned.

#### Meeting of July 13

Pursuant to a call issued by Dr. C. R. Woodson, state committeeman to the National Committee for Mental Hygiene, a committee on furnishing hospital units for nervous and mental disorders to the United States government:

The following members of the Buchanan County Medical Society met at the St. Francis Hotel, Friday noon, July 13, 1917; Drs. Woodson, Bell, Packwood, Whittington, Minton, Byrne, McGill, Mundy, Carl and Goetze. The various communications from the national committee were submitted, read and discussed and the following committee was appointed by Dr. Woodson to continue the work of the organization and secure applications for the above branch of service in the army: Drs. J. F. Robinson, Nevada; Porter E. Williams, Bunston; Geo. Williams, Odessa; J. A. Waterman, Breckenridge; G. Wilse Robinson, Kansas City; S. G. Burnett, Kansas City; M. P. Overholser, Harrison; F. L. Keith, Flat River; A. C. Pettijohn, Brookfield; W. N. Bayliss, Clarence; S. A. Johnson, Springfield; B. R. McAllister, Carthage; D. S. Booth, St. Louis; W. W. Graves, St. Louis; M. O. Biggs, Fulton; W. F. Bradley, Nevada; W. L. Whittington, St. Joseph; F. L. Long, Farmington; R. P. C. Wilson, Marshall, M. A. Bliss, St. Louis, and H. S. Atkins, St. Louis.

W. F. GOETZE, M.D., Secretary.



## CALLAWAY COUNTY MEDICAL SOCIETY

The Callaway County Medical Society met in Fulton, June 14, 1917, at the public library, the president, Dr. McCall, in the chair. There were present Drs. G. D. McCall, H. S. Major, H. I. Owen, E. L. Hume, E. McD. Rush, W. H. Williamson and M. Yates.

The minutes of the May meeting were read and approved.

Dr. Major read an interesting paper on the anti-syphilitic treatment of the insane, which provoked a general discussion of the subject.

Dr. Owen read a valuable paper on acute articular rheumatism. The free discussion of this and the preceding paper brought out an interchange of views that was mutually helpful.

After some general discussion of medical preparedness for the war, a motion was adopted appointing Drs. G. D. McCall and M. Yates a committee to list the physicians of the county who are within the ages prescribed by the government, 21 to 55 years, and ascertain who are willing to offer their services to the government.

On motion the society adjourned.

MARTIN YATES, M.D., Secretary.

## CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society met in the County Court Room, Cape Girardeau, June 12, with the following members present: Drs. R. T. Henderson, B. W. Hays, Arthur Poe, G. B. Schulz, D. G. Seibert, G. W. Vinyard and R. F. Wichterich.

In the absence of the president and secretary, Dr. Henderson presided and Dr. Poe acted as secretary pro tem.

Dr. Vinyard as delegate to the State Association made a report of transactions.

Dr. Vinyard read a paper entitled "My First Year in Practice, Actual Facts." The paper was witty and humorous and recalled to mind experiences of others present, and difficulties a man had in early times without modern methods of treating diphtheria, etc.; good discussion followed.

Dr. Poe read an interesting paper on "Diarrhea in Children." It was well prepared and the usual discussion followed.

## Meeting of July 9

The Cape Girardeau County Medical Society was called to order by the president, Dr. D. H. Hope, at the Commercial Club room, Cape Girardeau, on the evening of July 9. Besides the president the following answered to roll call: Drs. Dalton, Poe, Schulz, Statler, Wichterich, Yount and Wilson.

The minutes of the last two meetings were read and approved.

Resolutions regarding the physicians taking care of the practice of those that go to war were read and approved. The resolutions as read were prepared by the committee from the state society.

Program for the evening:

Modern Technique of Amputations by Dr. Porterfield, Jr.—absent.

Gun-shot Wounds by Dr. Hope. The essayist said he had not completed his paper but it created some discussion.

A surprise was in store. Dr. W. K. Statler read a case report of an old man whom he had treated for pellagra and, in the usual characteristic manner of our distinguished member, was received with pleasure. This was not part of the program but was offered as a side issue. We wish more of our members would contribute their time and talents toward keeping up interest in the organization.

E. H. G. WILSON, M.D., Secretary.

## CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, June 14. Dr. C. S. Dodd, the president, called the meeting to order, and the following members were present: Drs. T. W. Adair, H. A. Brierly, H. S. Crawford, C. S. Dodd, A. R. Elder, H. Jerard, D. S. Long, W. A. Moore, M. P. Overholser, R. D. Ramey, J. S. Triplett, and R. P. Yeagle.

An excellent program was carried out as follows: H. A. Brierly reported a very interesting case of renal calculus, and another of lagrippe, with a peculiar eruptive complication and inflammation of the mucous surface.

Dr. T. W. Adair reported some cases of pneumonia which were followed by pleural effusions and empyema.

Dr. R. P. Yeagle reported a case of tonsillitis which was followed by a peculiar form of insanity.

Dr. H. S. Crawford reported a case of a large abdominal cyst in a young girl, which on removal weighed 12½ pounds.

The program was a good one, and the members who were present took part in an interesting discussion of the different cases presented.

The secretary read a bulletin on Medical Mobilization and the War from the president and secretary of the American Medical Association, which was discussed generally, and the remarks by those present showed a patriotic spirit among the physicians. The secretary was ordered to report the names of all physicians under 55 to the secretary of the A. M. A. and Missouri State Association. The society also expressed themselves favorable to carrying out the recommendations of the resolution as adopted by the State Association at Springfield regarding the care of the practices of those who are called to the front.

H. S. CRAWFORD, M.D., Secretary.

## GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The meeting opened at 2 p. m. in the Vienna Court House, on June 14, 1917. President Fred Aufder Heide presided and Dr. C. A. Bunge acted as secretary. The following doctors were present: W. R. Ferrell, Vienna; James McCulley, Dixon; F. J. Westling, Freeburg; G. A. Nieweg, Vancleve; O. C. Fritts and W. E. Johnson, Belle; S. E. Gaston, Meta; J. J. Rademacher, Argyle; A. J. Crider, Brinktown; Jos. T. Brennan, Vichy, and Dr. Fred Aufder Heide, Drake. Drs. W. E. Leighton, Roland Hill and T. R. Ayers of St. Louis were guests of the society.

Clinic by Dr. W. R. Ferrell. Talk by Dr. T. R. Ayers of the Medical Reserve Corps. Talk by Dr. W. E. Leighton of the Medical Reserve Corps. Talk by Dr. Roland Hill of the Medical Reserve Corps.

Paper, "The Present Status of the Treatment of Carbuncles," by Dr. Roland Hill. Discussion by Drs. Ferrell, Leighton, Ayers and Bunge; Dr. Hill closing.

Clinics by Drs. O. C. Fritts and A. J. Crider.

The report of the Committee on Constitution and By-Laws was adopted as follows:

Meetings are to be held in April, June, September and November.

Election of officers to be held at the September meeting.

The day of the month and place of meeting to be left to the society.

In lieu of the Board of Censors, a committee of three shall be appointed to investigate the eligibility of new members, and they shall have the power to report on application at the same meeting at which application was received, if they are ready to report. If they do not report at same meeting they must report at next regular meeting.

(Signed) C. A. BUNGE,  
C. T. LEACH,  
J. J. FERRELL.

The following committee was appointed to investigate the application of Dr. Henry G. Isenberg: Drs. F. J. Wesling, A. J. Crider and J. J. Rademacher. The report of the committee was accepted in order to reform him, and on ballot he was elected, subject to the secretary writing him to cease cheap practice of medicine.

It was voted to have next meeting at Argyle, Mo., Sept. 27, 1917.

C. A. BUNGE, M.D., Acting Secretary.

#### Evening Session

The society reconvened at 8 o'clock in the Maries County Court House where there was a very large audience of people who greeted the doctors.

Dr. Roland Hill was the first speaker and his subject was "Preventive Medicine."

Dr. T. R. Ayers spoke on "The U. S. Army."

Dr. W. E. Leighton spoke on "Sciences in the War Zone."

This was reported to be one of the best public meetings in the history of the society.

JOHN D. SEBA, M.D., Secretary.

#### JOHNSON COUNTY MEDICAL SOCIETY

The Johnson County Medical Society met in regular session, June 12, at 1:30 p. m. at the Oak Hill Sanatorium in Warrensburg. Dr. L. J. Schofield, president of the society presiding.

This was "Clinic Day" with us. Several of the members brought some good material, and through the splendid efforts of Dr. C. C. Conover of Kansas City, as demonstrator and diagnostician, our ten patients furnished a splendid school of instruction.

This was the second time Dr. Conover graciously consented to be with us and assist us in our efforts to maintain and elevate organized medicine in Johnson County. It is beginning to look as though a good clinic is the best means of creating interest in medical meetings. The experience has proved that clinical material may be had in plenty if a little effort is made and the confidence of the people is secured.

At the close of our meeting, which was about 6 o'clock, we were served a splendid luncheon by Mrs. Maud Irwin, the matron of the sanatorium. A vote of appreciation was extended to her for her consideration of our temporal welfare.

#### Meeting of June 26

At the request of Dr. William J. Frick of Kansas City, in behalf of the national defense, the Johnson County Medical Society met, June 26, at the courthouse in Warrensburg and enjoyed a very interesting meeting. A large number of the physicians of the county were present. The resolutions as adopted by the state association in May were adopted with an amendment providing for the payment of 25 per cent. of all fees collected from service rendered to the practice of any physician during the time he may be engaged in serving his country during this present war, turning same over to either him or his dependents, as he may see fit to direct. By this we pledge ourselves to protect the interest of our brothers while they may be engaged in the service of war to protect the nations of the world against autocracy.

O. B. HALL, M.D., Secretary.

#### PETTIS COUNTY MEDICAL SOCIETY

The Pettis County Medical Society met in regular session at the courthouse in Sedalia, June 18, with President M. P. Shy presiding.

Dr. Matlack of Longmont, Colo., was invited to address the society. The doctor presented a number of lantern slides of Roentgen-ray pictures of the

abdominal viscera, which were obtained at the Mayo Clinics, the doctor accompanying the exhibit with an explanation of the pictures. This exhibit and lecture proved to be a very interesting and highly instructive feature of the meeting and was very much appreciated by those present.

A communication from Dr. W. J. Frick of Kansas City, regarding arrangements for taking care of the practice of physicians going to war was then read and on motion of Dr. E. A. Wood the president appointed the following committee to make arrangements with members of the society, in harmony with the resolutions adopted at Springfield on May 19: Dr. E. A. Wood, chairman; Dr. J. G. Love, and Dr. W. M. Wheeler.

Dr. Guy Titsworth then made an announcement regarding contributions to the Red Cross fund by the members of the society and distributed subscription cards to those present.

There being no further business, the meeting adjourned to the first Monday night in October unless sooner convened by order of the president.

#### PUTNAM COUNTY MEDICAL SOCIETY

The Putnam County Medical Society met with Dr. C. H. Carryer at Unionville, June 12, at 2:30 p. m. In the absence of Dr. I. M. Nulton, Dr. Carryer presided.

The following members answered the roll call: Drs. J. H. Holman, B. E. Cobb, C. H. Carryer, E. A. Montgomery, R. L. St. John, Honor Member, and C. P. Vores. The invited guests were Dr. Will Clapper of St. Louis, Dr. Lessenger of Mt. Pleasant, Iowa; Dr. Paul Baldwin of Kennett, Dr. Williams of Pollock, and J. D. Hayward, D.D.S., of Unionville, Mo.

The minutes of the previous meeting were read and approved and several matters of local interest discussed.

A committee composed of Drs. Holman, Vores and Carryer was appointed to consider how the interest of any member or members of this society might best be guarded in the event of his serving in any capacity in this present war during his absence from home.

The accounts of the society to Feb. 9, 1917, were examined and approved.

On motion of Dr. Holman and seconded by Dr. Cobb, the following resolution was adopted:

WHEREAS, Osteopathy is seeking recognition in the Medical Department of the Army, be it

*Resolved* by the Putnam County Medical Society that it is the consensus of this body that such action on the part of the Federal Government would not only vitally burden the efficiency of medical and surgical relief work and shamefully jeopardize the welfare of the soldier who loyally staked his life in his country's cause, but would also bring American medicine into national disrepute, sacrifice the respect of the intelligent public, and invite the contempt of the scientific world, and could but justly be expected to discourage the untinted and patriotic sacrifices on the part of practitioners of true medicine for which maimed and suffering humanity on Europe's awful fields of carnage is now so plaintively calling.

Dr. Lessenger gave an interesting talk on Focal Infections, and Dr. Clapper spoke at some length on Uterine Displacements, referring especially to injuries to the pelvic floor. These talks were thoroughly enjoyed and were discussed by all the members present.

There being no further business the society adjourned at 5 p. m. The time and place of the next meeting were left open to the call of the president.

C. P. VORES, M.D., Secretary.



## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**KEPHALIN-ARMOUR.**—The hemostatic phosphatid obtained from spinal cord and brain tissue of mammals. It is essentially the same as Brain Lipoid, N. N. R. For a discussion of the actions and uses see New and Nonofficial Remedies, 1917, p. 124, under "Fibrin Ferments and Thromboplastic Substances (Kephalin)." Kephalin-Armour is applied freely to bleeding or oozing surfaces in 1 to 2 per cent. suspensions in physiological sodium chlorid solution. Armour and Co., Chicago (*Jour. A. M. A.*, June 2, 1917, p. 1625).

**THORIUM NITRATE.**—A white substance, very soluble in water and alcohol. Soluble thorium salts resemble alum in their local astringent and irritant properties. They are not absorbed from the alimentary canal. The nonprecipitant double salts of thorium are practically nontoxic, even intravenously. Thorium salts are fairly radioactive.

**THORIUM SODIUM CITRATE SOLUTION.**—Prepared by dissolving thorium nitrate, 10 Gm., and sodium citrate, 15 Gm., in water, neutralizing with sodium hydroxide and diluting to 100 Cc. Being impervious to Roentgen rays, the solution is used to obtain cystograms of the renal pelvis and urinary bladder.

**THORIUM SOLUTION FOR PYELOGRAPHY.**—H. W. AND D., 10 PER CENT.—It is the same as thorium citrate solution. Prepared by Hynson, Westcott and Dunning, Baltimore.

**STRONGER THORIUM SODIUM CITRATE SOLUTION.**—Prepared by dissolving thorium nitrate, 15 Gm., sodium citrate, 22.5 Gm., in water, neutralizing with sodium hydroxide, and diluting to 100 Cc. It is used for obtaining urethral pyelograms.

**THORIUM SOLUTION FOR PYELOGRAPHY.**—H. W. AND D., 18 PER CENT.—It is the same as thorium citrate solution. Prepared by Hynson, Westcott and Dunning, Baltimore (*Jour. A. M. A.*, June 16, 1917, p. 1817).

**BETANAPHTHOL BENZOATE - ANTHONY - HAMMOND CHEMICAL WORKS, INC.**—A brand of betanaphthol benzoate which complies with the N. N. R. standards for this drug. Anthony-Hammond Chemical Works, Inc., New York City.

**CALCIUM CACODYLATE.**—The calcium salt of cacodylic acid containing from 43.5 to 48 per cent. of arsenic in the form of cacodylic acid and free from arsenite, arsenate and monomethylarsanate. It has the mild arsenic action of cacodylates. Calcium cacodylate is white, almost odorless, and very soluble in water.

**AMPULE CALCIUM CACODYLATE SOLUTION.**—MULFORD.—Each ampule contains calcium cacodylate, 0.045 Gm. in 1 Cc. The H. K. Mulford Co., Philadelphia.

**CHLORAZENE SURGICAL CREAM.**—It contains chlorazene, 1 Gm., in 100 Gm. of a base composed of sodium stearate, 15 per cent., and water, 85 per cent. The Abbott Laboratories, Chicago.

**BORCHERDT'S MALT EXTRACT WITH COD LIVER OIL.**—A liquid composed of cod liver oil, 20 per cent., and Borchardt's Malt Extract Plain, 80 per cent. The Borchardt Malt Extract Co., Chicago.

**BORCHERDT'S MALT EXTRACT WITH CREOSOTE.**—100 Cc. contain beechwood creosote, 4 minims per fluid-ounce, in Borchardt's Malt Extract Plain. The Borchardt Malt Extract Co., Chicago.

**BORCHERDT'S MALT EXTRACT WITH CASCARA SAGRADA.**—100 Cc. contain cascara sagrada, 60 grains per fluid-ounce in Borchardt's Malt Extract Plain. The Borchardt Malt Extract Co., Chicago (*Jour. A. M. A.*, June 23, 1917, p. 1911).

**LIOIODINE-CIBA.**—The ethyl ester of iodobrassicidic acid containing 41 per cent. of iodine. Lioiodine-Ciba is odorless, tasteless, insoluble in water but very soluble in fatty oils. When administered, it is absorbed almost completely and excreted more slowly than inorganic iodids but more rapidly than with other iodized fats. It is said to be less likely to produce gastric irritation than ordinary iodids. It is supplied only in the form of Tablets Lioiodine-Ciba, 0.3 Gm. A. Klipstein and Company, New York (*Jour. A. M. A.*, June 30, 1917, p. 1985).

### PROPAGANDA FOR REFORM

**SOME MISBRANDED COUGH REMEDIES.**—The following "cough remedies" have been declared misbranded under the U. S. Food and Drugs Act, chiefly because the curative claims made for them were found to be false and fraudulent: Barker's Remedy for Catarrh, Coughs, Colds and Rheumatism is essentially sugar and water with a small amount of cubebs, potassium iodid and creosote.—Mathieu's Cough Syrup, formerly called Syrup of Tar and Cod-Liver Oil, containing little, if any, tar and no cod-liver oil, but containing alcohol, chloroform, creosote and menthol.—Forrest's Juniper Tar, containing alcohol, petroleum and oil of tar.—Terraline Plain, found to be simply liquid petrolatum.—Tarraline with Heroin, found to be liquid petrolatum with heroin.—Classe's Cough Syrup, a syrup containing alcohol, glycerin, tolu and wild cherry, and having an odor of tar.—Essence Menthol-Laxene, containing alcohol, menthol, ammonium salts, chlorid, sugar, drug extract and an unidentified alkaloid.—Brown's Acacia Balsam, containing alcohol, acacia, nitrate, licorice, meconic acid, tartrates, reducing sugar, sodium and potassium compounds.—Sykes' Sure Cure for Catarrh, containing potassium chlorate, ammonium chlorid and small amounts of alcohol, hydrastin and methyl salicylate.—Warner's White Wine of Tar Syrup, containing opium and alcohol, no tar and but an insignificant amount of wine. Rawleigh's Golden Cough Syrup, containing alcohol, chloroform, menthol, guaiacol and perhaps horehound.—Rawleigh's Ru-Mex-Ol, containing 26.5 per cent. alcohol and vegetable matter in which rhubarb was indicated.—Gooch's Mexican Syrup of Wild Cherry, Tar, etc., containing morphin and alcohol, sugar, glycerin, methyl salicylate and benzaldehyde as flavor, and small amounts of tar and cherry (*Jour. A. M. A.*, June 16, 1917, p. 1863).

**FLAVORED EPSOM SALT.**—When a physician prescribes a dose of Epsom Salt to be taken in one of the official aromatic waters, he does not create a new invention. Yet the U. S. Patent Office has granted a patent for the "discovery" of a method for flavoring Epsom salt (*Jour. A. M. A.*, June 23, 1917, p. 1914).

**THE CALCIUM CONTENT OF THE BLOOD.**—It has been found that the calcium content of the blood plasma of cattle is remarkably constant, even when there is a continuous withdrawal as a result of pregnancy or lactation. It has also been found that there is no marked deviation from the normal in the calcium content of the blood serum of patients in the various stages of pulmonary tuberculosis. Even when a high milk diet was furnished over long periods, the calcium content of the blood was not increased above normal. Further, it was shown that the calcium content of the blood serum of normal human adults did not differ from that in sufferers from tuberculosis. Finally, it has been found that the calcium content of blood plasma differs little from the normal in advanced cases of uremia or in hemophilia or in purpura hemorrhagica (*Jour. A. M. A.*, June 23, 1917, p. 1915).

**RUSSELL EMULSION AND RUSSELL PREPARED GREEN BONE.**—The Council on Pharmacy and Chemistry reports that "The Russell Emulsion" and "The Russell Prepared Green Bone," put out by the Standard Emulsion Company, are inadmissible to New and Nonofficial Remedies. The Russell Emulsion is said to be composed of beef-fat, coconut, peanut and cottonseed oils, held in suspension by albumin. The mixture is called a "physiological" emulsion and is exploited on the theory that lime starvation is a main factor in tuberculosis and that large amounts of fat are required for the lime starved. There is no proof that tuberculosis is due to an insufficiency of lime in the tissues, and the claims made for the emulsion are grossly unwarranted. Particular attention is called to the exploitation of the emulsion by one Dr. Hague who talks before medical societies. The Russell Prepared Green Bone is said to be made by digesting chicken bones with hydrochloric acid and pepsin and adding glycerin at the end of the digestion. This is advertised as a lime food. The greater value of a few glasses of milk daily is not mentioned (*Jour. A. M. A.*, June 23, 1917, p. 1931).

**MORE MISBRANDED NOSTRUMS.**—The following "patent medicines" have been found misbranded under the U. S. Food and Drugs Act, chiefly because the curative claims made for them were unwarranted and untrue: Sterline's Asthma and Hay Fever Remedy is a water-alcohol solution containing potassium and sodium iodids, bromids and acetates, as well as some laxative substance.—Sterline's Bronchial Elixir, a solution of morphin, potassium citrate and aromatics in alcohol and water.—Lung-Vita, consisted essentially of a petroleum oil, saponifiable oil and a solution containing sugar and glycerin, with a small quantity of benzoic acid.—Arch Brand Nerve Tonic, a compound hypophosphite syrup.—Arch Brand Blood Remedy, containing 18 per cent. alcohol, sugar, potassium iodid, sarsaparilla and emodin-bearing drugs (*Jour. A. M. A.*, June 23, 1917, p. 1932).

**BROM-I-PHOS.**—The Council on Pharmacy and Chemistry reports that Brom-I-Phos (The National Drug Co.) is not eligible for admission to New and Nonofficial Remedies. The label declared the preparation to contain iodine, bromine and phosphorus in an aromatic base. The A. M. A. Chemical Laboratory found that Brom-I-Phos contained no free iodine, no free bromine and no elementary phosphorus; instead it appeared to be an alcoholic preparation containing iodid, bromid and a little phosphate. The Council rejected Brom-I-Phos because the statement of composition was unsatisfactory and misleading; because the therapeutic claims were exaggerated, and because the combination of bromine, iodine and phosphorus, or of bromid, iodid and phosphate is irrational (*Jour. A. M. A.*, June 30, 1917, p. 2001).

## BOOK REVIEWS

**SURGERY, GYNECOLOGY AND OBSTETRICS, July, 1917.**

This number contains twelve original articles, among them one by Dr. Major G. Seeling of St. Louis on "Cholecystectomy." These with the Department of Technique and the International Abstract of Surgery complete a book of the usual proportions and interest that this JOURNAL customarily presents. This issue contains about 200 pages.

**ANNALS OF SURGERY, July, 1917.**

Dr. Carroll Chase of Brooklyn contributes the leading article in this issue under the title "Notes on Service in the French Army Medical Corps." There are thirteen original articles on various topics and the proceedings of the Philadelphia Academy of Surgery and the New York Surgical Society. The book is well illustrated.

**1916 COLLECTION OF PAPERS OF THE MAYO CLINIC, Rochester, Minn.** An octavo of 1014 pages and 411 illustrations, edited by Mrs. M. H. Mellish and published by W. B. Saunders Company, 1917. Philadelphia and London. Cloth, \$6.50 net; half morocco \$8.50 net.

This is a collection of papers prepared and read before various medical societies by the members of the Mayo staff and their associates during 1916. Most of these papers have been published in the prominent medical journals and have already been thoroughly abstracted by others. The object of the book is to associate these authors together and to furnish their writings to the reader in a compact and convenient form for reading and reference. It is indeed a most interesting collection of papers. C. E. H.

**THE ROENTGEN DIAGNOSIS OF DISEASES OF THE ALIMENTARY CANAL.** By Russell D. Carman, M.D., Head of Section on Roentgenology, Division of Medicine, Mayo Clinic; and Albert Miller, M.D., First Assistant in Section on Roentgenology, Division of Medicine, Mayo Clinic. With 504 Original Illustrations. Philadelphia and London, W. B. Saunders Company, 1917.

This is a concise résumé of the present status of roentgenologic investigation of the gastro-intestinal tract. We do not find many original contributions but the field is well covered and the authors should be congratulated on the systematic manner in which the work has been arranged. Fortunately we are spared a long dissertation on the question of apparatus, wiring, etc., so fashionable heretofore.

The reproductions have apparently been selected with great care and are given, not because they might possess any unusual photographic perfections but for their characteristic value in illustrating the respective conditions.

The book has the objection which may be raised against the majority of kindred works: As a reference book it is too large and contains rather too much information of secondary value, while to the beginner it may appear difficult to understand, and possibly not detailed enough. On the whole it can be considered as good a work as we have today, and it should prove of distinct value to the roentgenologist as well as to the practicing physician.

A. DEW.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies

Issued Monthly under direction of the Publication Committee

ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

SEPTEMBER, 1917

Number 9

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION } W. H. BREUER, M.D., Chairman  
COMMITTEE } S. P. CHILD, M.D.  
                  } M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### INTESTINAL OBSTRUCTION; REVIEW OF EXPERIMENTAL OBSERVATIONS WITH PRACTICAL SUGGESTIONS\*

JABEZ N. JACKSON, M.D.  
KANSAS CITY

Acute intestinal obstruction remains today one of the black clouds of despair in the rapidly clearing sky of abdominal surgery. Its persistently high mortality makes it a nightmare in the dreams of the ambitious surgeon. Even the most recent statistics and those of cases in the hands of most expert operators show a mortality of from 40 to 60 per cent. Surgical ingenuity has been apparently exhausted in persistent effort to reduce this rate. The technic has varied from simple, rapid types of enterostomy for drainage to almost every conceivable form of resection or intestinal plumbing. A fortunate series of cases with some method has led individuals to planes of exalted hope, only to be followed by a succeeding series of failures in the same hands with the same methods—and despair. It is evident that operative technic alone, whatever the character, is inefficient to produce improved results.

It is but natural, therefore, for us to turn to experimental surgery for some possible solution of our problems. In the past few years this call has been answered by a series of most carefully and scientifically conducted observations by a number of magnificently qualified men. The fundamental problem of these experiments has been to determine the cause of death in intestinal obstruction. With this important question solved we can logically place the responsibility for past failures, and more rationally and intelligently hope for better results in the future. The revelations of these varied observations have led to some persistent minor differences of opinion on various points, but have on the other hand led to some

major agreements on essential basic principles. In years past there have been entertained a number of theoretically interesting views as to the causes of death. It is unnecessary to take time here with either their discussion or their enumeration. Suffice it to say, that with all these recent scientific experimenters, there is practical concord in the recognition of a toxemia as the essential cause of death. The nature and source of the toxic cause and the factors concerned in its elaboration are yet problems for fuller solution.

Draper was one of the first of American investigators to seriously attack this problem. Vidal and Roger in France had some years earlier propounded the theory that, particularly in the upper intestinal segments were elaborated normal secretions which under normal conditions were neutralized by opposing secretions of similar, general nature in succeeding lower segments. When, however, the secretion is retained in the segment in which it is produced, it is absorbed and is definitely toxic in action. The mucosa of the stomach, duodenum and upper jejunum were all possible sources of this toxin and also the pancreas and the bile. In Draper's opinion, the gastric secretion was of negligible importance and likewise the bile and lower gut segments. He was inclined to the theory that the duodenal mucosa was the principal source of origin of the toxin, with the pancreatic secretions as a possible factor. Death, therefore, was in a strict sense physiological, the result of the action of physiologically produced toxins. In obstruction low in the gut, where bacteria abound and where death is longer delayed, pathological factors are possibly or even probably added. In high obstructions, however, the pathological factor is absent. From these experimental observations Draper advanced two deductive therapeutic suggestions: First, the withdrawal of the retained secretions, either by direct drainage of the duodenum or by gastric lavage; and second, the administration of extract from the lower segments of mucosa containing some form of neutralizing secretion. Death was apparently

\*Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

to some extent delayed in the dog by such procedures.

A little later the problem was approached by Murphy, then in Boston, whose work has been since continued at Washington University. Murphy agreed with the view that death resulted from the absorption of a toxin. In his judgment, however, this toxin was not a physiologic secretion of any portion of the digestive tract. Instead, in his opinion, it was an elaboration, the result of bacterial activity in the stagnant gut. Furthermore, the rapidity of its formation and as well its toxicity were markedly influenced by the condition of the circulation in the obstructed area. In the presence of marked interference with the venous return circulation, the death of the animal was much more rapid than under other circumstances. In pure ligature obstruction, without impairment of either arterial or venous circulation, the dog lived a number of days. Where the venous return was blocked death resulted oftentimes in less than twenty-four hours. The chief objection to Murphy's theory of a bacterial origin of the toxemia has rested on the fact that death is much more rapid in high obstruction than in low, while on the contrary the upper or duodenal section may be practically free from bacteria while the lower gut is their natural habitation. Logically, we should hence expect slow death in the upper or sterile segment and rapid death in the lower ileac and colonic cess-pool. The reverse being true renders it rather difficult for us to accept Murphy's theory.

In view of the greatly hastened death in obstruction where there is marked vascular derangement, Murphy presents the clinical advice that under such circumstances the damaged area of gut should be resected, as it has probably lost its capacity to drain itself even after the original source of obstruction is removed.

Whipple and his associates at Johns Hopkins have added a series of very exhaustive and painstaking observations. Their conclusions have supported fundamentally the earlier theory of Draper. They believe that the toxemia is distinctly of duodenal origin and that it is a normal secretion. To their satisfaction they exclude the bile and pancreatic juices as factors in the toxemia, and finding the same toxemia in washed loops, they reject likewise the theory of bacterial origin. They have isolated the toxins from the obstructed area and produced by inoculation identical symptoms to those of acute intestinal obstruction. In his most recent work, Whipple even believes he has identified the specific toxin, and that it is a primary proteose.

Hartwell, another careful investigator, takes issue with Whipple and Draper, and denies that there is any specific secretion in the duodenum

with such specific toxicity. He does not question the toxic nature of the symptoms, but differs as to the source and condition of its origin. At least he cannot agree that under normal conditions any such secretions arise in the duodenum. Only when the duodenal mucosa has been damaged do these deranged conditions appear. In the presence of obstruction there is an immense outpouring of fluids into the gut, producing marked distention. Hartwell attaches much importance to the great loss of fluids from the body in obstruction as a potent factor in the production of death. At the same time the circulation of the mucosa is greatly interfered with by the distention and the damaged mucosa facilitates the absorption of toxins.

When one freely reviews the intricate series of experiments from which these varied observers have formulated their conclusions and realizes the wonderful variety of normal and abnormal secretions which may occur from the limitless glands of an unappreciated vast area of secreting surface; when one even ventures to imagine the chemical reaction which may occur in any area and their interchangeable effects on correlated organs of metabolism, one realizes the natural opportunities for variable conceptions. Indeed, the remarkable fact in the whole matter is that fundamentally their conclusions so nearly coincide.

First, in all we find it is agreed that the primary cause of death in fulminating acute intestinal obstruction is an acute toxemia.

Second, we find beyond dispute that the principal source from which the toxins may be obtained is in the duodenum and upper digestive tract.

Third, whatever may be the source or the nature of the toxic substance, stagnation through failure of normal peristalsis is the essential feature which permits absorption of the poison.

Fourth, distention and damage to the mucosa and to the circulatory conditions of the occluded area are at least contributing factors which, even though they may not initiate the toxin, favor its lethal development and absorption.

Fifth, the strength of the patient is further sapped by the losses of body fluids.

Sixth, general metabolism is secondarily upset with failing capacity to neutralize any poisons with which the system has to contend.

Seventh, if the patient survives long enough the primary toxemia, the transmigration of bacteria through the damaged intestinal walls may produce a final peritonitis, but this is not the primary danger.

*Practical Therapeutic Suggestion.*—With a definite idea in mind of the factors of death as revealed by these studies, may we not now glean at least a few practical suggestions?



1. With a positive primary obstruction of whatever character and with a distended and parietic gut as a sequence, it should be perfectly obvious that no purgative or other medicine administered by mouth at least can be of any possible benefit. This is absolutely certain. Furthermore, beyond being absolutely useless the administration by mouth of *anything* whatsoever is equally certainly an absolutely dangerous contribution to a condition in itself bad enough. Purgatives, drugs, food or even water but add to the bulk of accumulated material in the intestine above the obstruction, both by their own added volume and further by an enormous increase in the secretion of fluids which they induce. They thus greatly increase the distention already present, damaging thereby the mucosa locally and the circulation generally; they raise the tension and increase the rate and quantity of absorption of the toxic product whatever its nature, and thereby hasten death. If there were no other lessons to be learned from these studies than that of the utter uselessness, nay the positive damage of food, drug or water administration in acute intestinal obstruction, this lesson if it could be carried home to every family physician and blasted into his conscience in action, the tireless labors of these patient scientific experimenters would have been fully repaid. More patients are promptly killed by purgation in intestinal obstruction than by any other cause. *Keep everything out of the stomach* should be the first inviolable law.

2. Going still further it is likewise obvious that morbidity and death may be at least held back a while if we can also remove the existing accumulation of poison laden fluids above the obstruction. Nature with its wonderful intelligence makes an effort in this direction when with reversed peristalsis it initiates the regurgitant vomiting which finally becomes fecal. Fortunately, this process can be greatly facilitated by the use of the stomach pump. By its use oftentimes enormous quantities of foul fluid may be recovered from the stomach. In a few hours a repetition of the use of tube will bring increased quantities. It has become clinically obvious to us that gastric lavage stimulates the emptying of the duodenum backward into the stomach even in the absence of obstruction below. The post-operative phenomena of acute gastric dilatation, adynamic ileus and similar conditions which formerly added a very painful and definite mortality to oftentimes simple abdominal procedures, can be practically mastered by the application of this knowledge. In fact, we may add in passing that we believe many other variously diagnosed post-operative conditions are in reality primarily the sequence of a duodenal stagnation and intoxication, and may

ofttimes be relieved by gastric lavage begun early before the patient is hopelessly toxic and continued until, with the relief of the toxemia, normal action of the intestine is resumed and symptoms have subsided. The stomach tube should be the fixed and ever present companion of the intelligent general practitioner, even as it has of necessity become for the surgeon who hopes to boast a respectably low operative mortality.

A recent case of intestinal obstruction in our service illustrates particularly well the effect of gastric lavage in retarding serious symptoms. The case, a boy of 10 years of age, was brought into the hospital with a diagnosis of acute intestinal obstruction, about five days after the first onset of symptoms. He was found with fecal vomiting, an enormously distended abdomen, a very rapid pulse and labored breathing, a cold surface and a general expression of closely impending dissolution.

Our experience of the past with cases in this condition had been that of absolute certainty of prompt death from any surgical intervention. So, expressing our experience, we declined to operate. Without, in this case, entertaining any definite hope we decided to see what might be accomplished along the lines we are indicating. Accordingly, gastric lavage every three hours was ordered, everything by mouth was inhibited, continuous proctoclysis with bicarbonate of soda and glucose instituted, and hypodermoclysis of salt solution was given about every four hours. The patient showed rapid improvement. In a couple of days the abdomen was flat, the vomiting had ceased, the pulse, temperature and respiration were normal, and the lad was feeling fine. No mass could be palpated in the abdomen and we really concluded that our primary diagnosis had been in error. The treatment was continued for several days longer and then as the boy appeared practically normal, but was becoming restless with hunger, we permitted the administration of small quantities of liquid nourishment and water, and discontinued lavage and proctoclysis. In twenty-four hours distention became again manifest with increasing pulse and respiration and evidences of sickness. A return to original treatment again brought a recession of symptoms in a day and then after a few more days we went back to food. Again a return of symptoms. We now decided that after all there must be some surgical condition present and after twenty-four hours of lavage and other previous treatment with a subsidence of symptoms, operation was instituted. To be brief, a complete obstruction from intussusception was found about 10 inches from the ileocecal valve. The slight mass was low in the pelvis explaining our failure to palpate. It first looked like a simple volvulus with adhesions. In gently

separating our supposed adhesions, the distal end of the gut was brushed entirely loose. In other words, there had been a practically complete amputation of the gut and the lumen would not more than admit the lead of a pencil. Here we had an absolutely complete obstruction to the point of amputation, and yet all serious toxic symptoms had been kept entirely in abeyance for nearly ten days after institution of lavage and two weeks from the inaugural obstruction. From this clinical experience corroborating the deductions from scientific experimentations, we strongly urge gastric lavage as a possible means of delaying, at least, serious symptoms until operative interference can be secured. We also urge the application of the same lines after operation has been done until normal intestinal peristalsis is resumed.

3. The lost body fluids should be replaced by proctoclysis and hypodermoclysis, both before and after operation. Thus fluids are replaced, toxins diluted, elimination increased and acidosis neutralized.

4. In operative procedure there have come two suggestions: (a) Murphy has urged the resection of any area of distinctly damaged gut wall, the probable particular source of toxin production. This suggestion is, however, of but limited practicability. In cases of early diagnosis with the patient yet in good general condition, and in the hands of a capable technician, it is undoubtedly the ideal procedure. Unfortunately, the great majority of cases do not reach a surgeon in such a favorable stage. In the average case, late and desperate, we would question any method, however theoretically proper, which involved much added time with added shock.

(b) The direct surgical drainage of the high intestinal area, which is obviously theoretically correct, has been practically applied by Hugh McKenna of Chicago in eight cases, with recovery of all. The principle is, a quick enterostomy high in the jejunum as the sole primary operation. This has resulted in tiding by the crisis of acute toxemia. In six to eight weeks later, with the patient in good condition, the obstructed and damaged area was successfully resected. This suggestion, based upon such results, certainly is worthy of adoption until by fuller experience its value is proved or disproved.

#### CONCLUSION

It is evident that surgical relief of obstruction is the only final salvation for life, and should be instituted *early* before the patient has already absorbed a lethal dose of poison. Delay is only excusable at all in doubtful diagnosis. It is really not excusable then for practically all acute abdominal crises which may in any way simulate obstruction are themselves likewise

surgical conditions. The only excuse for the responsible physician is the refusal of patient to accept his advice. And finally it is probable that mortality can be favorably influenced by the application both before and after operation of the suggestions above deduced from certain scientific knowledge.

Argyle Building.

#### DISCUSSION

DR. FRANCIS REDER, St. Louis: As you have heard Dr. Jackson state, the whole matter is theoretical; and it appears that it is going to remain theoretical for a long time to come.

In the beginning of the doctor's paper you have heard it stated that it is one of the darkest chapters in surgery. So it is. In the same breath the doctor said there was a dawn on the horizon; and happily so there is. The mortality of acute intestinal obstruction ranges from forty to sixty per cent. It has been running that as far back as I have been practicing medicine, quite a few years. The mortality rate has not been decreasing much, and we must ask ourselves the question: Why is there still so high a mortality?

We maintain so high a mortality because we are coping with a lesion which, first, usually falls into the hands of the general practitioner, and second, in a counseling manner into the hands of the internist, and third, as a final hope into the hands of the surgeon. Usually much time is lost with the general practitioner who endeavors to make a diagnosis. Now as to making a diagnosis of acute intestinal obstruction I may say here that we should be very guarded in our use of that term diagnosis. It is better to speak of recognizing an acute intestinal obstruction. A diagnosis is usually made upon the operating table or at the post-mortem. In endeavoring to recognize an acute intestinal obstruction much valuable time is often lost by the general practitioner.

When the recognition has been made, there comes the question what can be done with medicine, and the lesion is usually subjected to a trial of medication. The only thing is the practitioner must know his limitations in the case and must know how far he can go with medicine. If he is not successful with his medication then the question is asked: can surgery do something for this patient? Then, when the case of intestinal obstruction reaches the surgeon it becomes imperative on him to extend to this patient every measure and every means at his command to save this patient's life, no matter what the patient's condition. Unfortunately, surgery is invariably a last recourse when it should be the first recourse, and the first recourse because it is the only recourse, as Dr. Jackson has remarked, for saving your patient's life. There is, of course, a great difference between acute intestinal obstruction and chronic intestinal obstruction. Dr. Jackson's paper deals more with the acute form because it is in the acute lesion that immediate relief becomes imperative.

The essayist has spoken of the controversy which has arisen relative to the cause of death. It is true that we have an awfully hard time to find out of what our patients died when they die from the effects of an acute intestinal obstruction. We feel quite certain that it must be a toxemia, for when we consider the neuromuscular apparatus of the intestinal tract, and take into consideration the bacteria infested contents of the bowel, mostly in a high degree of toxicity and assuming that a pathologic lesion, a disturbance of some sort, be it extrinsic or intrinsic, mechanical or idiopathic, is interfering with the normal function of the intestinal fecal stream, conditions physiologically normal become forced into a sudden change and bacteria that may have been innocent become hostile and virulent.



DR. MARSH PITZMAN, St. Louis: Dr. Jackson, as I take the paper, has said that there is no disagreement, that we are united in our opinion as to cause of death. As I understood his paper, he gave, really, two opinions; one, that there was a toxin set free which was the cause of death; the other, that dehydration is a big factor in the fatal termination. The first opinion was given by Dr. Draper and Dr. Murphy. The opinion of Hartwell, whose work appeared later, gave emphasis to the importance of dehydration. He experimented on animals, tying the first part of the duodenum with a string, and said that they very promptly died. He then took similarly treated animals and gave them water, either under the skin or per rectum, and said that he could maintain the life of his dogs under these circumstances. He laid great stress on the dehydration factor as a cause of death in high intestinal obstruction.

Personally, I feel that the case Dr. Jackson quotes, demonstrates the necessity of putting water into such an individual. You have here an individual with a complete obstruction. He can take no water by mouth, and we all know that these patients vomit tremendous quantities of water. If this water is not replaced, the probability is that the condition will quickly result in death. Personally, I am much more impressed with the dehydration side than with the toxic side and believe that the men who have argued the toxic cause have not established their point.

DR. WILLIAM T. COUGHLIN, St. Louis: As to whether it is a question of dehydration or of toxemia, I think that both have something to do with it. It has been shown very clearly that if the mucosa above the point of obstruction has been injured death is more likely to occur—and every one knows that an injured mucosa absorbs less freely than an uninjured one. The reason for this must be that there is not an ordinary physiological absorption but rather by osmosis the poisonous material gets out into the circulation, into the tissues of the body and is absorbed through the blood or lymph vessels. Then the patient loses water, thus toxins are more concentrated, for if the patient is given water the toxin that he is absorbing from his bowels is being diluted. The toxin kills by paralyzing the heart; if the toxin is well diluted, the patient will bear such toxin a longer time than will the patient who is receiving the toxin in almost a pure form.

The intestinal obstruction-intussusception case, I do not think was well chosen. Those patients I am sure have lived quite a long time in some instances; they do not present the terribly fulminating appearance of cases that come with an internal hernia strangulation, or an obstruction, perhaps the worst of all, due to gall-stone.

The intestine after operation should be absolutely emptied of all that poisonous material. If that cannot be done, absorption from the obstructed loop will likely still go on and kill the patient. Ether will help to kill the patient. The best method, I think, is to use a local anesthetic and hurriedly open the bowel above the point of obstruction, draw it out on the abdominal wall, and open—then give morphine, water and stimulants.

DR. ROLAND HILL, St. Louis: There is just one point that Dr. Jackson made that I would like to emphasize. I refer to the importance of the stomach tube in cases of intestinal obstruction. It is indeed a most important adjunct. A great many cases of intestinal obstruction are found to develop in acute cases of appendicitis. If these patients are given purgatives they will go on to acute obstruction, with vomiting of fecal matter and the patient will die. If the stomach tube is used the patient will get better very often, with gradual subsiding of the symptoms. The use of the stomach tube to relieve the small intestine of the con-

tents regurgitated into the stomach will oftentimes quiet obstructive symptoms until surgery is available.

DR. W.M. ENGELBACH, St. Louis: I want to say just a word in regard to placing the responsibility for deaths from intestinal obstruction upon the general practitioner, as the surgeons have tried to do this morning. In the first place, while the general practitioner and the internist are liable probably to the surgeon for the diagnosis in a certain number of cases, there are also a certain percentage of cases where the general practitioner or the internist is called in consultation by the surgeon, and those cases occur generally in the surgeon's own hands, particularly postoperative obstruction, mechanical obstructions.

There is another point that I want to bring out, and that is in regard to the diagnosis of the type of obstruction; if we are going to use the word "obstruction," in the broader sense. We know that there are three types of intestinal obstruction. First, there is the mechanical type, which has been referred to by nearly all the surgeons who have spoken this morning. It is an absolute surgical indication in nearly all of its ramifications. But we have two other types that are not surgical and are also obstructions. One is the adynamic obstruction, due, for instance, to lead poisoning. The other type is due to conditions arising outside of the gastro-intestinal tract entirely, such as are associated with gall-stones, renal stones, etc., when we have apparently the same picture that occurs, at least in the first half day, that occurs in the mechanical type of obstruction. Those cases, to a large extent, are not surgical. Catharsis is indicated; operation is not indicated. Consequently, I believe that the general practitioner, the internist, has some field in the diagnosis, and also in the responsibility as far as that is concerned, in these cases, because some of them are purely medical and some of them are purely surgical and we must differentiate between the two before we can set forth any definite plan of treatment.

DR. C. E. HYNDMAN, St. Louis: Gentlemen, I think that we are getting into deep water if we are undertaking to tell the general practitioner something. The principal point in Dr. Jackson's paper for all of us to remember is what he says about the early treatment of obstruction. It does not matter particularly which form of acute obstruction you have, or what it comes from; you have the acute obstruction and the treatment in the early stage of that means either recovery or death of your patient.

There are two theories, perhaps both right. I think they are. I think it is toxemia and I think it is loss of body fluid that brings about death. If any one doubts that there is a toxin present in acute mechanical obstruction let him take a few drops of the fluid in the abdomen which has passed through the intestinal wall and inject it into a guinea pig, and he will see very soon that he has a dead guinea pig. The experiment has been carried out repeatedly, and I think the theory of toxin is established beyond a doubt. The theory of loss of body fluid has also, I think, been established beyond doubt.

But wherever the responsibility, and whatever the cause, the point to be remembered is, don't kill your patient before he has a chance to get well. If he has an intussusception, if he has a reflex obstruction, if he has an acute mechanical obstruction, the treatment is the same: Don't give him medicine, don't give him food; but empty his stomach and put the fluid into him in some other way. That is the point in this paper for us all to remember, and if you disregard that point, the theory of whether your patient dies from toxemia or whether he dies from loss of body fluid is absolutely immaterial.

DR. JABEZ N. JACKSON, Kansas City, closing: I think the last speaker has said about all that I wanted to say in conclusion.

I think there is no difference of opinion among the experimenters in regard to a toxin being the actual cause of death. Hartwell's theory of loss of body fluids is not accepted by Hartwell himself as accounting for the cause of death. He simply emphasizes the fact that it is an important contributory factor, of which I think there is no doubt. It is important, but it is secondary. There may be a good many contributing factors, the loss of body fluids, the disturbance in metabolism, a secondary toxic nephritis, a secondary degenerative condition of the liver, and what not. It is useless to go into all these side issues of the secondary things; the fundamental thing is the toxemia.

In reference to the remark of Dr. Engelbach that there are some cases of adynamic ileus, I said that in those cases of adynamic ileus, of postoperative acute gastric dilatation, that early recognition of them, with gastric lavage and the withdrawal of food, might cure them without any surgery. I want to say, however, with the utmost emphasis that I can give, that I do not agree with Dr. Engelbach that those are the cases in which purgatives should be administered. Absolutely not. Such cases of parietic gut, as you may call it, should receive exactly the same treatment as the others; that is, the emptying of the stomach, and the inhibition of any food. It is a parietic condition, and if one increases the amount of food or fluid in that gut, he is going to hurt that patient, whether he has acute mechanical obstruction or not.

I did not put forth my remarks as a criticism of the general practitioner or of any other; but I say that any one who treats an obstruction with purgatives, food and medicine, is killing his patient, I do not care whether that patient is to be operated on or not. But if you want to save your patients, this thing is certain, that you are not going to increase the probability of recovery of anybody by the use of your purgatives, by the use of your drugs, and by the use of food. This is the fundamental thing, whether the case is operated on ultimately or not, and some of them may escape the necessity of an operation by sloughing out. Those that do not escape an operation may be preserved by this means in such condition that an operation may be safely done. The factors, therefore, of the gastric lavage, the replacement of the fluid and the inhibition of contents in the stomach are absolutely without discussion valuable aids to the possibility of the recovery of these patient in obstruction of whatever type.

#### ANTERIOR POLIOMYELITIS \*

ARCHER O'REILLY, M.D.  
ST. LOUIS

The extensive and serious epidemic of infantile paralysis in New York and the eastern states during the last summer, with its very widespread newspaper publicity, has made this disease of especial interest not only to the orthopedist and the pediatrician, but also to the general practitioner and has aroused the fear of almost all laymen.

Anterior poliomyelitis is not a new disease. Its resulting deformities have been recognized in an Egyptian mummy. It was first described by Heine in 1840, and the first epidemic on record was in a parish of Louisiana in 1841. Since then the disease has spread throughout

Europe and America. Since 1910, cases and epidemics have been reported from almost all parts of the country, culminating in the serious epidemic of last summer. The general belief is that there will be a fresh outbreak of the disease this year, and that it will probably extend westward, so that its effects will be felt in this section of the country.

I shall divide this paper into three sections: (a) A statistical study; (b) a brief summary of recent work, and (d) orthopedic treatment.

(a) Up to the present, it is almost impossible to get accurate statistics on the prevalence of anterior poliomyelitis in this country. In many cases the diagnosis is not made and in many states it was not a reportable disease until very recently; and even now there are several states in which a report is not required; among them is Missouri. In February a letter was sent to the secretary of the state board of health of all the states asking for a report on the prevalence of poliomyelitis for the last five years. Table 1

TABLE 1

State	First Date of Statistics
Alabama	1916
Arkansas	Not accurate
Arizona	1916
Colorado	1916
Connecticut	1910
Delaware	Ref. to U. S. P. H. S.
Florida	1916
Indiana	1910
Iowa	1910
Kansas	Not ready
Kentucky	Ref. to U. S. P. H. S.
Louisiana	1915
Maine	1916
Maryland	Ref. to U. S. P. H. S.
Massachusetts	1912
Michigan	Not definite
Minnesota	1912
Mississippi	1916
Missouri	No
Montana	1911
New Jersey	1911
New Mexico	No
New York	1912
North Carolina	No
North Dakota	No
Ohio	1912
Oregon	Ref. to U. S. P. H. S.
Pennsylvania	1910
Rhode Island	1910
South Carolina	1911
South Dakota	1913
Utah	No
Virginia	Ref. to U. S. P. H. S.
Wisconsin	1910
Wyoming	1916

gives a list of the states replying, and under remarks the dates of the first statistics given. It is fair to assume that dates after 1912 show the year in which the disease was first reportable.

Table 2 gives the number of cases and the mortality from 1912 to 1916.

The statistics in Tables 2 and 3 are made up from the replies to my letter and from the reports of the United States Public Health Service. Where there was a discrepancy between the two, I have used the reports from the state boards of health.

\*Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.



I do not believe that too much reliance can be placed on these figures especially the earlier ones, nor in the West where the disease has been comparatively rare. This belief seems to be borne out in the mortality rate which in some cases, not charted, ran over 100 per cent. Lovett gives the death rate at from 5 to 15 per cent. In the New York epidemic the death rate was about 26 per cent., which was regarded as being very high. When these statistics were secured the mortality statistics for 1916 in a number of states had not been tabulated, so that in some

maximum and then to decline. It would also appear that after an unusual number of cases in one year there has been a decided drop the following year. This is very evident in New York in 1912 and 1913, and in Vermont in 1914 and 1915, and may also be observed in a number of other states.

Table 3 shows the indicated case rate per annum per 1,000 inhabitants.

It must be remembered, however, that poliomyelitis is a disease of early childhood, and therefore its incidence to the susceptible popula-

TABLE 2

States	Cases	Mor- tality	Cases	Mor- tality	Cases	Mor- tality	Cases	Mor- tality	Cases	Mor- tality
	1912		1913		1914		1915		1916	
Alabama	...	...	...	...	...	...	...	...	186	27%
Arizona	...	...	...	...	1	...	12	50%	2	50%
Arkansas	206?	...	...	...	...	...	...	...	16	...
California	...	...	90	37%	56	46%	62	31%	11	...
Colorado	...	...	...	...	...	...	...	...	15	...
Connecticut	31	23%	29	10%	13	38%	43	9%	949	25%
Delaware	...	...	...	...	...	...	...	...	76	...
Florida	...	...	...	...	...	...	...	...	8	...
Georgia	...	...	...	...	...	...	...	...	2	...
Idaho	...	...	10	40%	...	...	...	...	10	...
Illinois	480	12%	126	18%	142	24%	...	...	833	...
Indiana	132	31%	103	37%	49	57%	39	44%	178	17%
Iowa	77	48%	57	49%	19	84%	19	...	259	...
Kansas	72	15%	90	17%	25	52%	48	31%	87	...
Louisiana	...	...	...	...	7	...	10	...	82	...
Maine	...	...	...	...	...	...	...	...	132	17%
Maryland	32	50%	...	...	12	...	66	...	...	...
Massachusetts	169	45%	361	...	551	...	135	...	1,928	...
Michigan	...	...	56	55%	49	57%	71	42%	496	...
Minnesota	35	65%	85	35%	22	36%	123	21%	906	11%
Mississippi	...	...	...	...	113	20%	85	3%	269	...
Missouri	...	...	...	...	...	...	...	...	11	...
Montana	11	...	8	...	2	...	3	...	9	...
Nebraska	...	...	5	...	...	...	...	...	14	...
Nevada	...	...	5	20%	...	...	2	50%	0	...
New Hampshire	...	...	...	...	...	...	...	...	61	26%
New Jersey	47	36%	79	23%	37	...	36	...	4,050	...
New York	1,108	16%	491	25%	224	31%	257	17%	13,132	...
North Dakota	...	...	...	...	...	...	...	...	30	33%
Ohio	304	52%	125	42%	63	73%	466	17%	446	...
Oklahoma	14	43%	...	...	...	...	...	...	35	...
Oregon	...	...	3	33%	...	...	1	...	...	...
Pennsylvania	258	45%	135	71%	106	61%	162	53%	2,060	24%
Rhode Island	4	...	73	12%	11	18%	27	4%	237	20%
South Carolina	20	...	31	...	21	...	2	...	129	...
South Dakota	...	...	7	29%	5	20%	13	15%	89	13%
Tennessee	...	...	...	...	...	...	...	...	39	...
Texas	...	...	...	...	...	...	8	...	63	...
Utah	...	...	...	...	...	...	...	...	5	...
Vermont	...	...	...	...	301	17%	42	40%	51	...
Virginia	229	10%	246	...	...	...	241	...	180	...
Washington	...	...	18	50%	21	43%	10	30%	24	...
West Virginia	...	...	...	...	...	...	...	...	54	...
Wisconsin	56	48%	86	20%	31	48%	14	64%	487	16%
Wyoming	...	...	...	...	...	...	...	...	7	43%

cases it has been impossible to give the death rate. It will be noticed that, in 1916, when the disease was better known and had aroused more widespread interest, the death rate shown was on the whole decidedly lower, especially in these states where the disease was more common.

This interest in the disease would also account for its apparent large increase throughout the country in 1916. Many cases which before were unrecognized or not reported, were now reported.

It is impossible to draw any conclusions from figures as inaccurate as these must be, or which cover so short a period. It is interesting to note, however, that there seems to be a tendency in some cases for the disease to work up to

tion is much greater than this table would indicate.

For comparison, in the last column, I give the incidence of scarlet fever for 1915, as shown in Bulletin 343 of the Public Health Reports of the United States. From this it will be seen that scarlet fever is much more common than infantile paralysis, but we must remember that the average death rate of scarlet fever for these statistics was only 3.55 while poliomyelitis was about 20 per cent., and that as a rule children recover from scarlet fever without any serious disability, while in poliomyelitis 66 per cent., according to the New York statistics of last year are left with a permanent paralysis of a more or less serious nature, a result that makes

it a much more serious disease than scarlet fever.

The maps show the distribution of infantile paralysis from 1912 to 1916. These maps do not show any definite tendency for the disease to move in any definite direction from year to year, but rather a general tendency to increase throughout the entire area.

(b) The literature in the last year has been full of articles on poliomyelitis. Mathers, Rosenow, Towne and Wheeler, Nuzum and Herzog, in papers that appeared practically

should be healthy, and should have a Wassermann test. Five to fifteen c.c. or more should be injected into the spinal cord for about eight consecutive days.

Poliomyelitis seems to be spread mainly by contact, either by patients suffering from abortive cases, or by healthy carriers.

The best method of prevention, consequently, is by quarantine and isolation. The rôle of flies and other insects in its spread has not been determined, but Flexner and others think that they may play a part, mainly as carriers of infected material and that they should be carefully excluded from the sick room.

In the orthopedic literature at the present time, Lovett's and Martin's work on testing and recording muscle strength by a spring balance is important in giving us a definite record of the condition of the paralyzed muscles and as a method of judging the progress of treatment. Lovett has also described a method of muscle training, which is most valuable in the convalescent stage. He has worked out a series of graded exercises for each muscle group. These are preferably given by an instructor, but may be given at home by the parents. Lovett also found by careful observation with his spring balance tests that overexercise is most injurious, and may result in permanent injury to the weakened muscles.

(c) The orthopedic treatment of poliomyelitis may be divided into three stages: (1) The acute stage, from the onset of paralysis to the cessation of pain. (2) The convalescent period during which there is more or less improvement; this period lasts a about one year. (3) The stationary stage in which there is no further improvement.

(1) In the first period the orthopedic treatment is directed mainly to securing absolute rest. This may be done by placing the patient on a Bradford frame, which consists of a rectangular gas pipe frame covered with canvas. The patient is strapped to this and all motions are prevented. During this period muscle contractures are very apt to develop, due to toe drop or other faulty posture. Great care must be taken to preserve the physiologic muscle balance of the limbs. As a result of faulty posture the weakened muscles may be so stretched that they will become permanently disabled. In this stage light braces or plaster of Paris bandages may be used to prevent these deformities. When plaster is used great care should be taken not to make it tight; it should be bivalved and the upper half removed. All massage and electricity are contraindicated in this stage.

(2) The treatment in the second stage of poliomyelitis is most important. If properly carried out it may, by conserving and improving the residual muscle power, be a powerful

TABLE 3

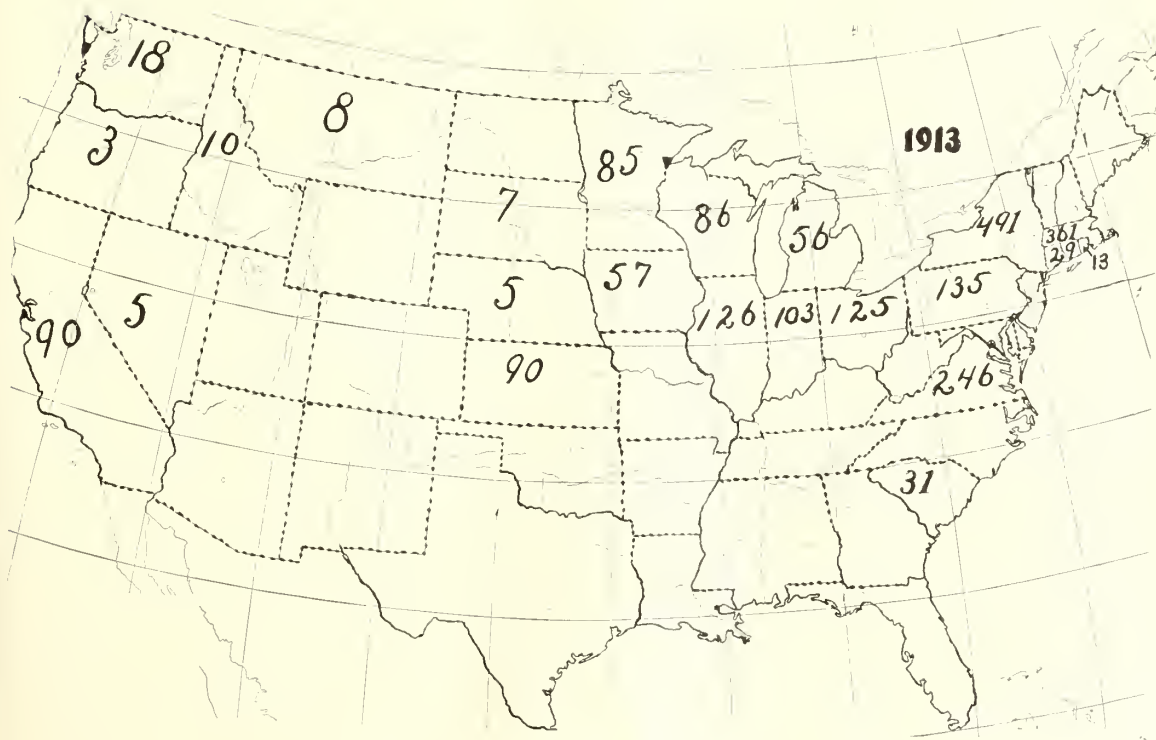
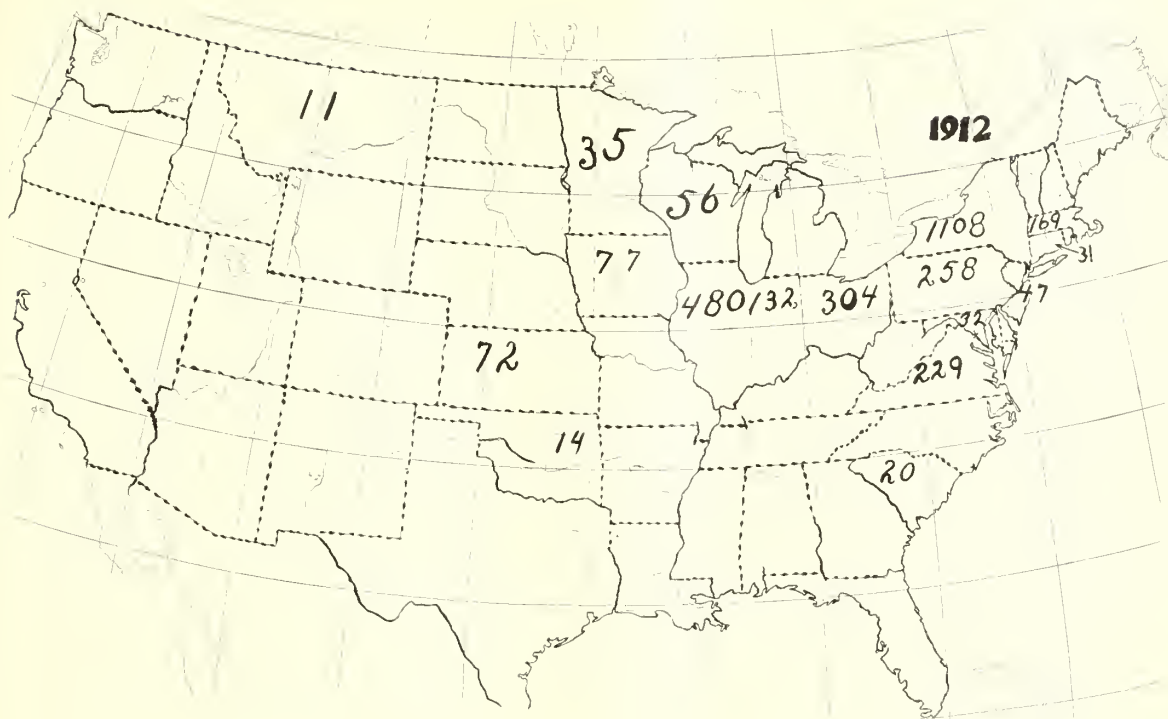
State	Case rate per 1,000 per annum					Scarlet Fever
	1912	1913	1914	1915	1916	1915
Alabama	.....	.....	.....	.....	0.056	0.306
Arizona	.....	.....	0.004	0.008	0.023	0.263
Arkansas	.....	.....	.....	.....	0.003	.....
California	.....	0.026	0.020	0.022	0.017	1.016
Colorado	.....	.....	.....	.....	0.010	.....
Connecticut	0.026	0.025	0.009	0.029	0.688	1.341
Delaware	.....	.....	.....	.....	0.314	.....
Florida	.....	.....	.....	.....	0.008	.....
Idaho	.....	0.026	.....	.....	0.021	.....
Illinois	0.082	0.021	0.024	.....	0.125	.....
Indiana	0.033	0.038	0.021	0.013	0.057	1.453
Iowa	0.034	0.022	0.009	.....	0.091	.....
Kansas	0.041	0.051	0.014	0.027	0.043	0.818
Kentucky	.....	.....	.....	.....	0.014	.....
Louisiana	.....	.....	0.004	0.005	0.017	0.055
Maine	.....	.....	.....	.....	0.141	.....
Maryland	0.042	0.008	0.016	0.049	0.199	1.783
Massachusetts	0.048	0.102	.....	.....	0.428	.....
Michigan	.....	0.019	0.016	0.024	0.140	0.997
Minnesota	0.011	0.034	0.009	0.057	0.366	1.763
Mississippi	.....	.....	0.059	0.044	0.053	0.201
Missouri	.....	.....	.....	.....	0.003	.....
Montana	.....	0.021	.....	.....	0.174	.....
Nebraska	.....	0.004	.....	.....	0.011	2.550
Nevada	.....	0.053	.....	0.019	.....	.....
New Hampshire	.....	.....	.....	.....	0.128	.....
New Jersey	0.016	0.027	0.011	0.012	1.342	1.619
New York	0.116	0.050	0.023	0.026	1.278	1.567
North Dakota	.....	.....	.....	.....	0.024	.....
Ohio	0.062	0.025	0.013	0.092	0.077	1.803
Oklahoma	0.007	.....	.....	.....	0.010	1.094
Oregon	.....	0.004	.....	0.001	0.016	0.476
Pennsylvania	0.032	0.020	0.012	.....	0.202	.....
Rhode Island	.....	.....	.....	.....	0.306	.....
South Carolina	.....	.....	0.613	0.001	0.068	0.172
South Dakota	.....	0.012	.....	.....	0.054	.....
Tennessee	.....	.....	.....	.....	0.017	.....
Texas	.....	.....	.....	0.002	0.014	0.394
Utah	.....	.....	.....	.....	0.011	1.381
Vermont	.....	.....	0.833	0.116	0.140	0.864
Virginia	0.108	0.116	.....	0.111	0.061	0.975
Washington	.....	0.13	0.015	0.007	0.013	0.462
West Virginia	.....	.....	.....	.....	0.031	0.281
Wisconsin	0.022	0.031	0.013	0.006	0.140	0.805
Wyoming	.....	.....	.....	.....	0.022	1.091

simultaneously reported having found a polymorphous micrococcus that varied in size with the culture media, with the age of the growth, and, when inoculated into monkeys produced typical poliomyelitis. Other investigators claim, however, that this organism is a contamination and not the same as the one discovered by Flexner.

Though many drugs have been suggested in the acute stage, no specific seems to have been found; but all authors agree on the necessity of absolute rest and quiet.

The most important therapeutic suggestion is probably the use of convalescent blood serum. This should be obtained as early in the convalescence as possible, and in all cases the donor







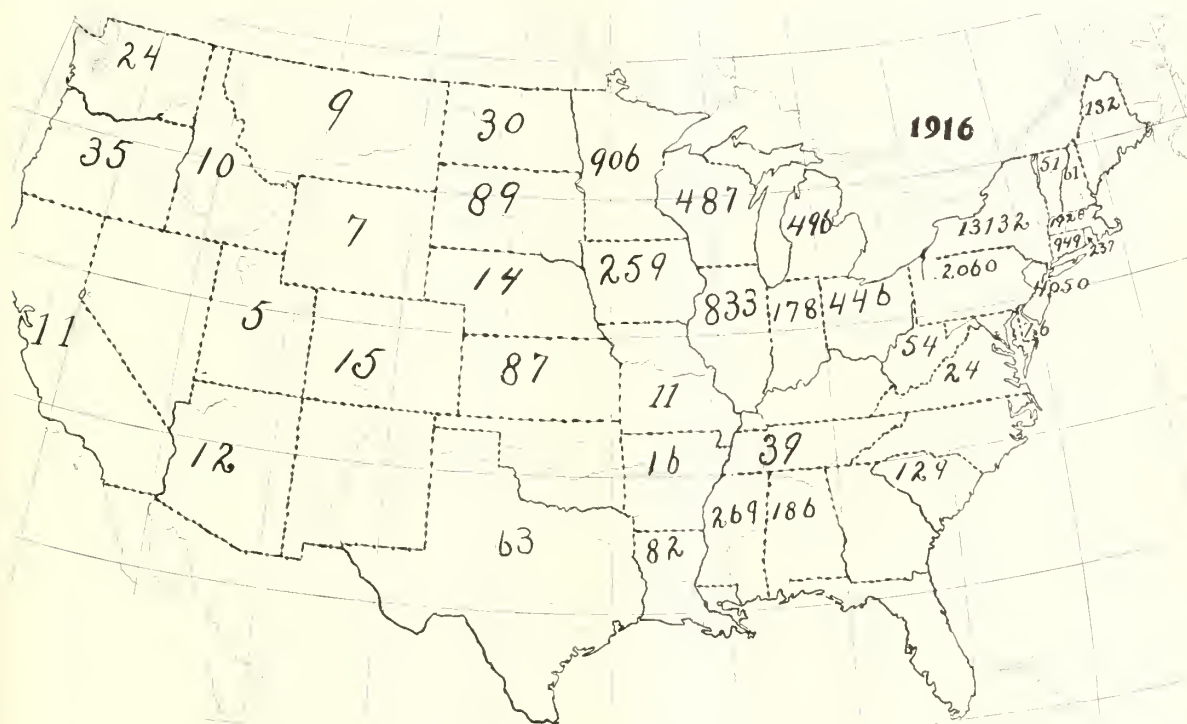


factor in restoring function and make the patient a useful citizen. Improper treatment and neglect may result in marked deformities and may destroy any muscle power that is left.

In this stage braces are used to assist locomotion and to prevent deformity and muscle stretching. All muscle power should be conserved and increased where possible. No operation should be performed, except the simple ones of tenotomy, to correct a deformity. The patient should have careful massage and muscle training, and this should be faithfully continued until no further improvement is apparent. In many cases a brace limiting motion will allow a stretched and exhausted muscle to regain its tone and power to a greater or less extent will be restored.

many cases which would otherwise be helpless cripples may be made useful and self-supporting citizens.

In New York, where the epidemic was most severe, the question of after-care has been gone into most systematically. A committee composed of orthopedic surgeons and social workers has been appointed to direct the after-care. This committee has undertaken three tasks: the first, to distribute the children among the various agencies and to keep track of them; the second, to secure funds for the transportation of all children needing it, to and from the various dispensaries. The third task was, to raise a fund of \$250,000 to assist in providing treatment, home care and training for these children.



Above all, they are urged to keep the child under treatment for at least one year.

Bartine, in a paper published in the *Medical Record* for Dec. 16, 1916, in writing of the after-care of infantile paralysis during the recent epidemic, says: "Too little progress, however, is being made to provide facilities for treatment and care for people of moderate circumstances. Those who are striving in this direction have met with many stumbling blocks. We should give our united support to such a movement, but by so doing we should not overlook the private practitioner and at the same time the private practitioner should not overlook or underestimate the wonderful advantages of this movement for the ill and afflicted, many of whom eventually become crippled financially and their families impoverished, as well as in many cases becoming a burden on the community."

In New York and other communities arrangements have been made to collect and keep on hand a large supply of convalescent serum for the treatment of infantile paralysis.

The Harvard Medical School, in conjunction with the Massachusetts State Board of Health appointed a commission of experts who could be called on at any moment to assist in making a diagnosis of infantile paralysis in the pre-paralytic stage and thus, if possible, lessen the ravages of the disease. The commission could also furnish convalescent serum.

I have outlined the measures taken in the East to secure adequate after-care of the sufferers from infantile paralysis and as much as possible to minimize the ravages to this disease because of the widespread belief that we may have a recurrence of the epidemic this year, which will probably involve Missouri. I believe that now is the time to prepare for such an event and to prepare for it before the danger has arrived.

At present in Missouri there is no requirement that cases of poliomyelitis be reported to the state board of health. It is very important that such should be the case, because only in this way can an outbreak be discovered early, and steps be taken to prevent its spread. A single case may start an epidemic.

There should be some method for investigating the cases and for securing a definite diagnosis. It has been my experience that many cases have not been diagnosed and an undiagnosed case is a distinct menace to the community.

In the cities where infantile paralysis is more common a census should be made of all cases. This could be done by the boards of health or by the hospital clinics so that in case of an epidemic blood in large quantities might quickly be secured for immune serum.

The above are a few of the many important

problems that would arise were we to have a serious epidemic, and they are also of vital importance in preventing one.

In the event of an epidemic the problem of after-care, training and teaching of the cripples would also arise, and would have to be worked out with the various social agencies.

If these problems could not be handled by the state board of health, it might be advisable for the state medical association to appoint a commission to work in conjunction with the state board of health, and for this reason I wish to bring the question to your serious consideration.

Metropolitan Building.

#### DISCUSSION

DR. J. D. SEBA, Bland: It is in regard to Dr. O'Reilly's paper that I wish to speak. I visited last September the Minnesota State Board of Health, and I spent one day going through that great institution. I believe, as far as my investigation has been conducted, the state of Minnesota has by far the best method by which it has been attempted to dispose of or control the disease of poliomyelitis. They have in that institution a department, which is presided over by a clerk, in which is kept the record of every case of poliomyelitis found in the state. They have, in the first place, on their staff, a number of physicians who are familiar with the disease and when a case of poliomyelitis is reported they immediately send one of these men to investigate it and to write the history of that particular case. That history is filed away and from time to time notes are added to it to record the progress of the case. If the patient dies, a record is made of the fact; if the patient recovers, a record is made of that fact. The history of each individual case is carefully kept up.

That is not all, however. They have there a great map of the state and in every division of territory where there is a case of poliomyelitis they put in a pin with a white head. If there are five cases of poliomyelitis in one community, they take out the five white-headed pins and put in one red-headed pin. If one of the cases in that community dies, they put in one black-headed pin; and by looking over the state map you can at once see the areas in which the disease is found in that state and how carefully they have kept tab on it.

They showed me the histories of poliomyelitis, and they stated that they had come to the conclusion that the disease was being transferred from one case to another. In other words, as far as they could see, every case that had been found in the state of Minnesota had been exposed, or had had a chance to be exposed to a previous case. But how the disease was transferred from one case to another, they did not know. This was, however, not true in one case recorded there. The history in that case stated that a dentist's child was afflicted, although this child had lived on an island and had absolutely not been away from that island for over a year. They did not see how this case could have been infected from any previous case, unless the disease had been transmitted through some animal.

DR. C. R. WOODSON, St. Joseph: I believe there has been no extensive epidemic in this state. There was a rather extensive epidemic a few years ago on the northern border of Kansas and the southern border of Nebraska. Most of the cases occurring in Missouri have been of the endemic form.

This is an acute, infectious disease, with a sudden onset. In some instances, it is characterized by fever;



in other cases, there is no fever. There is a marked flaccid paralysis and extensive relaxation of the ligaments of the joints. The muscles most frequently affected are the anterior lateral and tibialis anticus; certain associated groups are affected.

As to the origin of the disease, the fly theory seems not to have any adherents at this time, but the invisible or unrecognized filtrate seems to be the favored theory. So far there is no microscopic or other method devised that can recognize it. But the fact that the germs in the cerebrospinal fluid when injected into the monkey will produce the disease is well known. Much work has been done on the subject by the best men of the country and while much enlightenment has followed there is still a great deal to be learned.

The disease affects the anterior columns of the cord, the vascular and perivascular spaces. It is easy to recognize it in marked cases. The initial paralysis is much greater than the residual paralysis. As to the treatment, it is necessary to maintain a proper position, protecting the joints. This proper position of the limbs must be maintained with as much care and scrutiny as you would use in preventing the displacement of a fracture. By maintaining the limbs in certain positions it has been found that the work of the orthopedic surgeon will be lessened, for you do not have any absorption of bone taking place. It is necessary to employ heat. Warm water is good; the electric pad is good. Certain symptoms must be met as they arise, but there is no great amount of good to be done through any very early medication. In convalescence the serum treatment is receiving much attention and we are to expect much from it—at any rate, we hope to do so.

One reason why we have cases that are incurable is because the strong groups take away from the weaker groups; the posterior muscles of the leg take away the anterior muscles of the leg and stretch or overpower them. The application of a plaster cast in the early chronic stages is in my judgment the best treatment, and it must be long enough to allow the weaker groups to regain strength. I am sorry to say that the application of braces has not been as thoroughly carried out as it should be, many persons thinking it necessary to put braces on a child that are so heavy as to injure it. It is better to put on very light ones, made of aluminum or something of that kind, and those are beneficial.

Dr. J. ARCHER O'REILLY, St. Louis: I would like to say a few words on Dr. Dickson's paper. I want to emphasize the rôle that flat foot plays in these static conditions of the knee. Flat or weak feet are, I think, one of the most common causes of these painful knees, so that it is advisable, when any patient comes to you with a painful knee, especially when it is more painful toward evening after he has been on his feet for a long while, to look at the feet. Many patients are thought to have rheumatism and are treated for that for a long, long while, and then are very promptly cured by the application of some form of support to a weakened foot.

There is one point that I would like to speak of. I was glad that Dr. Seba made those statements about what is being done in Minnesota because I think Minnesota is one of the up-to-date states as regards its attitude toward poliomyelitis. They have had the advantage there of an epidemic that has been going on for some time and they know its seriousness. As I tried to bring out in my paper, there is a necessity for being prepared for an epidemic. We have not had one in this state to amount to anything. I tried some years ago with little success to get statistics of the disease in our state.

The main thing that I want to bring out is this, that we should have some method of recording these cases so that they may be accurately traced and fol-

lowed up. It is not the cases of infantile paralysis that everybody knows that are dangerous. It is the very mild cases, the abortive cases, that are serious. They are allowed to go about over the country, to play with other children and to mingle with people generally. They are the ones that spread the infection and they are the ones who start an epidemic, and the ones the state board of health should make a particular effort to get hold of. That is why it is most important that we should have a careful record of every case.

Dr. Woodson said that he was sorry not to have had the work on poliomyelitis summarized. I have made an abstract of this, some time ago, and only this year there were 150 to 160 articles in the literature, so in the time that was allotted to me I could not possibly go into the treatment or the prognosis of the disease. I could only touch on a few selected points. The main thing, as I said, that I wished to bring out was the necessity of preparedness.

### THE ADULT THYMUS AND ITS TWO TYPES OF DYSFUNCTION\*

GEORGE HOWARD HOXIE, M.D.  
KANSAS CITY

The object of this paper is to show:

1. The importance of the thymus in endocrine upsets.
2. The two types of disturbance found in thymic dysfunction.
3. The localized pathologic conditions in the thymic area.

The thymus is a small mass of tissue lying in the anterior mediastinum. It is prominent in fetal life and infancy, and during that time may fill out the space between the trachea and the sternum and extend out well toward the carotids. In adult life one finds normally only shreds of tissue hanging down, as it were, from the level of the jugulum into the anterior mediastinum. These shreds in the living subject look like strings of fat and measure perhaps a half centimeter in diameter and two to four centimeters in length. They may lie against or behind the anterior edges of the pleurae; or, in hyperplasia, crowd the pleurae to the side.

The thymus originates from the third branchial pouches in early fetal life, and the two lateral halves grow forward and coalesce in the median line (in the third fetal month), sometimes retaining a connection with the thyroid above, sometimes retaining the connection with the fourth metamere. The coalescence in the median line is not complete, consequently the two parts develop independently and one lobe may develop out of proportion to the other.

They reach their greatest size between birth and 2 years of age. Then they remain more or

\*Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

less stationary until puberty, when atrophy sets in. But at no time do they quite disappear, for shreds of parenchyma can be found in the fatty tissues up into the seventh decade. Since the thymus is very sensitive to starvation and emaciation, it has been difficult to identify this tissue in the ordinary material of the morgue and dissecting room. Examples of the normal gland should be looked for only in the robust subjects dying from traumatism or very acute disorders.

#### HISTOLOGY

When examining normal thymus tissue under the microscope one notices first that there are lighter and darker areas, the difference seeming to be that the latter contain more lymphoid cells or lymphocytes. These areas are not sharply demarcated but seem to merge into one another. Further observation reveals a network of cells of the endothelial type among which the small round cells (or lymphocytes) seem congregated. Here and there one notices masses of distinct epithelial cells arranged concentrically—forming pearls, the so-called Hassall's bodies or corpuscles. Many cells have large bodies staining with eosin and reminding one of plasma cells.

Thymus tissue is differentiated from other lymphatic bodies in that it has a decided mixture of lymphatic and epithelial elements, whereas in the tonsils and adrenals, the epithelial elements are sharply separated from the lymphoid. It is differentiated from the lymph nodes in that it has no proliferation centers, no border sinus in the cortex and only the suggestion of a connective tissue framework (Matti).

The epithelial elements, the so-called reticulum cells, originate in situ, are fixed, and, although they react to injuries, are relatively stabile. The lymphoid elements (the so-called thymus lymphocytes) are derived from cells that have migrated into the thymus anlage. They are mobile and react vigorously in childhood to insults. In adult life they are usually of slight importance. They vary in number with the size of the body and also with its health and nutrition. The activity of the eosinophiles consists in storing up the active thymus secretion. That is, they are possibly the carriers of the hormone action of the gland. They are formed from the large reticulum cells. They are, therefore, a functional unit with the reticulum cells. Hart (Berlin) believes that the epithelial cells represent the real parenchyma of the organ and on them rests its activity. Therefore, the lymphocytes may be said to represent the condition of the body as a whole, and the epithelial cells that of the gland.

Hammar (quoted by Matti) gives the weight of the gland as set forth in the accompanying

table. It is important to note that the weight of the parenchyma does not parallel that of the whole mass. These figures, of course, are illustrative rather than absolute, particularly with reference to adult conditions; for it is only of late years that thymus tissue is being watched out for and studied in routine postmortems.

HAMMAR'S FIGURES (MATTI)

Age	Gross Wt.	Net Wt. (Paren- chyma)	Relation to Body Wt. Pro Mille
New-born	13.26	12.33	4.2
1-5	22.98	19.26	2.2
6-10	26.10	22.08	1.2
11-15	37.52	25.10	0.9
16-20	25.58	12.71	0.5
21-25	24.73	4.95	0.4
26-35	19.87	3.87	0.3
36-45	16.27	2.89	0.3
46-55	12.87	1.48	0.2
56-65	16.08	0.73	0.3
66-75	6.00	0.03	0.3

If we accept the experimental work of Klose and Matti it is evident that the gland has to do with calcium metabolism and forms a unit in the complicated interdependent pluriglandular system. For when the gland is removed in puppies one finds a dystrophy of the bones, and a hypertrophy of the spleen and adrenals. Since it atrophies when the sex glands begin to functionate, we infer that it is antagonistic to these glands.

#### HYPERTROPHY OF THE THYMUS

"There is a true persistence of the thymus and a true hyperplasia of the thymus, with which there appears often, perhaps always, not merely a hyperfunction but rather a dysfunction of the gland. They are the expression and some part of the phenomena of an abnormal constitution, of a disturbance of the equilibrium of the pluriglandular endocrine system, on which as a basis various disease-forms may develop. From the hyperplastic thymus a toxic influence seems to be exerted on the heart. The existence of a true status lymphaticus has not yet been proven with certainty. Rather, it appears as if the swelling of the lymphatic apparatus represents a tissue reaction that is dependent upon the thymus and which can show itself in the lymphoid components of the thymus itself. Two sharply marked histologic types stand out: the so-called medullary hyperplasia, which represents a primary increase of the specific organ tissue; and a hyperplasia of both zones in nearly normal relations, which argues for a secondary increase of the nonspecific lymphoid elements of the gland in a (usually primary) hyperplastic thymus."—Hart, *Vichows Archiv*, vol. 214, p. 82.

"Enlargement of the thymus gland may, in some cases, produce symptoms and physical



signs closely resembling any form of tumor of the anterior mediastinum. Such a condition of affairs is rare, owing to the fetal character of the gland, but it has occurred in quite a number of cases. The causes for such a hypertrophy are not clearly known, and the treatment is equally unsatisfactory, while the differential diagnosis of this condition from other diseases of this space is virtually out of the question,

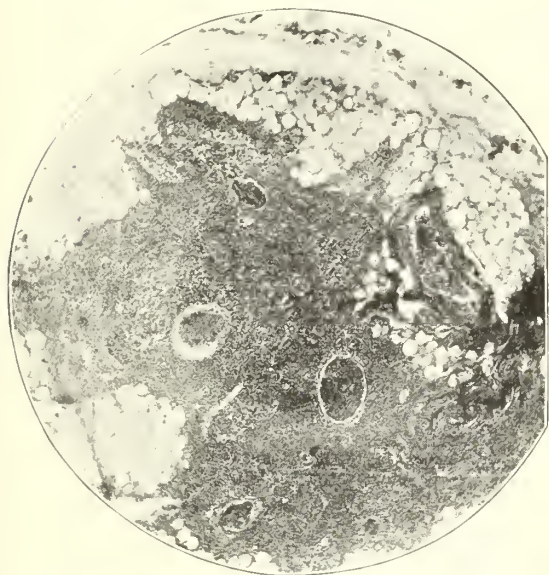


Fig. 1.—Lymphatic type of hyperplasia. From a case of septic abortion, age 23.

unless percussion gives a dullness beginning high up in the neck and extending without a break down along the chest wall.”—Hare, *Affections of the Mediastinum*, 1889, page 147.

The symptoms caused by hypertrophy of the thymus are in the child largely due to pressure. In the adult, on the other hand, the symptoms are largely due to the chemical products of the reactivated glands.

In the child, therefore, we find a dyspnea of the obstructive type, with the child trying to relieve itself by tossing about and bending its neck in various directions. Such a dyspnea occurs frequently in the course of bacterial infections, particularly those in which the throat is involved. There is the sense of weight on the upper chest.

In the adult, on the other hand, the complaint is chiefly of weakness; of being short winded; of being unable to get a long and satisfying breath. The weakness is also evidenced in the abdominal area by complaints of flatulence, constipation and loss of appetite. The muscles seem fairly strong, but the patient finds himself unable to use them. Thus even walking is fatiguing.

In other words one has a picture of the con-

ventional myasthenia gravis without the bulbar symptoms.

The family history of these patients, both infantile and adult, shows neurotic stigmata. Thus a child in my practice who was troubled by dyspnea in every attack of tonsillitis, measles, pertussis or similar trouble, dyspnea that was always accompanied by the submanubrial dullness, had a father who was afflicted with a psychopathic disorder so pronounced as to necessitate his being kept in an asylum for some time. Again the mother of another patient, an adult, had Glenard's disease. Whether such stigmata have any material force in the thymic disturbance is a question.

In the child the finding of submanubrial dullness should put one on guard. One should examine for an enlargement of the bronchial glands, especially by listening for an increase in the whispered voice along the spine down to the level of the scapular spine (d'Espine's sign). The extension downward of the normal area for hearing the whispered voice points to an enlargement of the bronchial glands rather than to that of the thymus. Anteriorly one is apt to hear a stridor over the manubrium from the compression of the trachea, if the thymus is enlarged. This is rarely the case when the

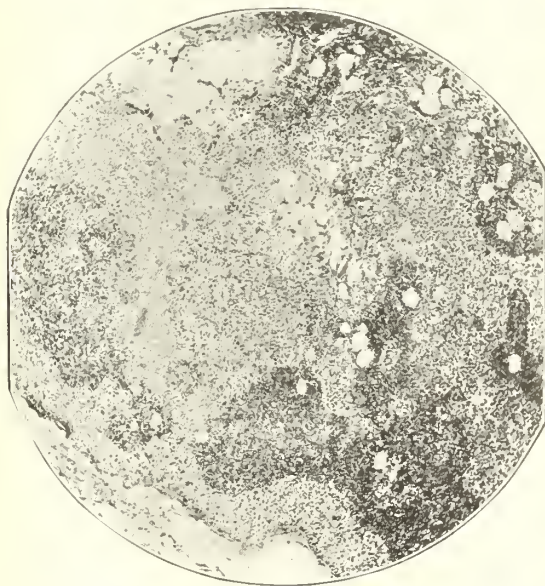


Fig. 2.—Epithelial type of hyperplasia. From a case of myasthenia, age 21.

bronchial glands are enlarged. The Roentgen ray should be used to verify the findings made by physical examination, and in the child the thymic shadows are so distinctive that little doubt need be entertained as to whether the gland is hypertrophied or not.

In the adult the conditions are more complicated. We must distinguish between (a)

substernal thyroid, (b) enlarged aorta, or aneurysm, (c) peribronchial glands, (d) tumors of the mediastinum, and (e) reactivated thymus. Simple percussion is not sufficient to do this. The presence of d'Espine's sign would generally rule out thymic hypertrophy. Pulsation and thrills would also rule out the thymus. But this leaves most cases in doubt. Therefore, the Roentgen ray must be resorted to. The fluoroscope will determine whether the mass moves with the act of swallowing, thus identifying the thyroid. It will also show pulsation, thus identifying arterial tumors. If the chest be viewed in the oblique position one can distinguish bronchial glands from the thymus—for the former fill up the clear space just in front of the spine. The fluoroscopic views should be verified by plates taken both in the anteroposterior and the right oblique planes.

The microscopic study of tissue removed at operation and postmortem has shown two general types or conditions. In the first, we find the lymphatic elements predominating; in the second, the epithelial. The first is found in the hyperplasia of childhood and in the hyperplasia accompanying septic or toxic disorders in the adult. The epithelial elements predominate wherever the history shows endocrine upsets, as in the reactivated thymus of the adult. The first makes itself known chiefly by its mechanical influence; the second by its chemical. We illustrate the first from a case of septic abortion; the second from a case of myasthenia. We might have chosen for the latter equally well a case of Graves' disease.

The treatment in the child is that of removal of the gland—or its destruction by means of the Roentgen ray.

In the adult we begin with the employment of the thyroid and sex glands in extract. If after a month's trial—coupled, of course, with bed rest and general treatment—no results are obtained, it is justifiable to resort to excision, or at least to heavy therapeutic doses of the Roentgen ray.

The dose of the thyroid extract varies from  $\frac{1}{2}$  to 2 grains, given on an empty stomach, at least 30 minutes before eating.

In females we now have good preparations of corpus luteum to add to the thyroid. In males we are not so fortunate, but now and then can find a good preparation of the testicular fluid. Of these preparations the dose is not yet well fixed and needs to be worked out in each case.

A good adjuvant for this medicinal treatment is arsenic administered with the needle. I prefer arsacetin in doses of 1.0 to 2.0 c.c. of a 10 per cent. solution. Sodium cacodylate may also be used in doses of 3 to 7 grains. I usually administer the arsenic every third day.

## TUMORS

*Adenoma.*—Dr. Jones of Minneapolis reports a case of adenoma of the thymus in a young adult. The symptoms were those of myasthenia gravis. The autopsy showed an encapsulated tumor of the thymus the size of a walnut.

*Dermoid.*—Dr. A. E. Hertzler of Kansas City (*Am. Jour. Med. Sc.*, August, 1916) reports a dermoid in a young woman of 23. The symptoms were "difficulty in respiration" and a "sense of fulness in the neck." The tumor bulged above the jugulum. Hertzler collects and reviews briefly seventy-two cases from the literature.

*Sarcoma* has been the type of tumor most frequently reported. Its rapid growth and evident malignancy soon clear up the diagnosis.

*Lymphoma* is difficult to distinguish from sarcoma. The blood picture usually establishes the diagnosis. The treatment is surgical.

624 Rialto Building.

## DISCUSSION

DR. O. H. McCANDLESS, Kansas City: This paper deserves discussion and a very, very much better discussion than I can give you. Dr. Hoxie also deserves a world of credit for his researches along a line that most of us are not familiar with. Very few of us are familiar with the pathology and the histology of this gland. Some of us are familiar with its function, and more of the profession meet this gland in practice than they are aware of. There are many thymic changes that we have attributed to other causes. This is perhaps hardly relevant to the doctor's talk on pathology, but I think there is much of the ordinary, everyday work that will be benefited by these investigations on the thymus.

This work on the thymus gland has deeply interested me for a long time, and we have for some time past made it a practice in our laboratory no matter what portion of body was being fluoroscoped to observe carefully the thymus gland. I have frequently mentioned to the doctors, after they have signed a death certificate, that they might well go back, do an autopsy and change their death record from the cause that they gave to that of thymic disease. In two instances they have come back and confirmed the suggestion that I gave them, stating that the individual had succumbed to thymic disease, had died a thymic death.

When you see a patient losing strength, who is also suffering from a choking sensation in the chest, you will do well at least to consider the thymus very, very seriously. The matter has a practical bearing in the interest of accuracy in mortuary records.

DR. GEORGE H. HOXIE, Kansas City, closing: I thank Dr. McCandless for daring to stand up and say something about this subject. It is one, as he says, that demands more attention than has been given it. If you will watch some of your nervous cases, some of those neurasthenics where Dr. Duke would pull out the teeth, you will find mixed up with other findings a submammary dullness and under the fluoroscope a shadow under the manubrium extending downward to the heart. It is wise, I think, in those obscure cases to consider the possibility of there being present a thymic enlargement or a thymic increase in function which might explain all the symptoms that the patient exhibits. Usually those patients complain of sluggishness of the bowels, among other things, and I have had



patients come to me who had been operated on for appendicitis, and things of that sort, as the cause of their trouble, usually without any effect, in whom I have found thymic trouble. I saw a woman the other day who had been under all sorts of treatment for nervous condition, on whom all sorts of mental suggestion had been tried to persuade her that she had merely a nervous trouble. She knew that she could not get her breath, you could not persuade her that her difficulty there was something imaginary; and she had a perfect right to her opinion, because, as a matter of fact, in certain postures, and under certain conditions the thymus was interfering with her breathing.

### THE IMPORTANCE OF THE NONSURGICAL WORK OF THE ARMY MEDICAL OFFICER\*

DANIEL MORTON, M.D.

F. A. C. S., Lieutenant-Colonel, Medical Corps, Missouri  
National Guard, Retired

ST. JOSEPH

In these days of war when our country is calling on the medical profession to join in the great combat that is on us, it may be well to discuss for a few brief moments something of the work to be done, and of the relative importance of its various features. It is always well to enter a hard fight with eyes clear to see the task to be accomplished, and a cool head and a stout heart to perform it.

Very few graduates in medicine have any knowledge at all of the duties of a soldier or of military life. This condition will pass away with the adoption of universal military training. The doctor is as much a soldier as the infantry man, the cavalry man or the artillery man, and must conform to all the orders and customs of the service. It is to the neglect of these things that the medical officer owes many of his difficulties. If he is a wise man he will inform himself, in the beginning of his career, in these important matters, and by so doing enhance his usefulness may fold. There is nothing so irritating to a commanding officer as an unsoldierlike medical officer. The medical officer must learn to be self-reliant and care for himself and his command, to have courage, to be fruitful in resources, even-tempered, just, and to cultivate those qualities of a soldier which all successful officers in every arm of the service must have. In other words, he must lay aside his civilian habits and put on those of the soldier, think the part, read the part, study the part, act the part, and play the game to the limit. Unless he does this, his usefulness as a doctor will be greatly impaired. By accomplishing this transformation, he will secure the confidence and respect of those whom he commands, and of those who command him. He will be judged by his associates in the army

more by his abilities as a soldier than by his professional attainments, for they will be competent to estimate the first and unable to estimate the last.

The administrative duties of an army medical officer are many and important, and in this work likewise the civilian doctor has had no training. He has to learn it after entering the service, and it is to him the most unpleasant and distasteful of his duties. And yet this part of the work is of the greatest importance and must be carefully and painstakingly done. One feature, the paper work, is absolutely necessary, not only for the preservation of records of professional work which involve many questions of high military importance such as pensions, but because of the necessity for prompt returns to the commanding officer of the army of all papers having to do with the coordination of the medical department with the fighting force, and with the actual physical fitness of the command for active duty. No commanding officer will undertake a campaign until he knows the health of his command, and this can only be known from the health reports of the medical department. In many other ways which cannot be mentioned in such a discussion as this, the administrative duties of the army medical officer will tax his executive ability to the utmost—ability that has no relation to his professional training as a doctor, but is essential to his usefulness as a soldier.

Before the scientific era in medicine, the real work of the army medical officer was confined to service rendered those injured in battle. As a result, the army medical officer became known as an army surgeon, and this designation has come down to succeeding generations carrying with it from those old days the associations of a former age, and having added thereto the spectacular glamour which surrounds present-day surgery. In 1537 Ambroise Pare, he who first used ligatures for hemorrhage, was at Turin. His narrative is informing and interesting in this connection and I quote a paragraph:

"We entered pell-mell into the city, and passed over the dead bodies, and some not yet dead, hearing them cry under our horses' feet; and they made by heart ache to hear them. And truly I repented I had left Paris to see such a pitiful spectacle. Being come into the city, I entered into a stable thinking to lodge my own and my man's horse, and found four dead soldiers, and three propped against the wall, their features all changed, and they neither saw, heard nor spake, and their clothes were still smoldering where the gunpowder had burned them. As I was looking at them with pity there came an old soldier who asked me if there was any way to cure them. I said no. And then he went up to them and cut their throats, *gently*, and without ill will toward them. Seeing this great cruelty, I told him he was a

\* Read before the Missouri State Medical Association, May, 1917, Springfield, Missouri.

villain; he answered he prayed God, when he should be in such a plight, he might find some one to do the same for him, that he should not linger in misery."

A few days ago I saw in Kansas City another great Frenchman, Marshal Joffre, a man of heart as tender as the great surgeon whom I have just quoted. In France they call him "Papa Joffre," and this is how he got the name. In the early days of the war a task had to be performed that meant death to those assigned to do it and Marshal Joffre called for volunteers. The requisite number of young men promptly volunteered and were ordered to report to Marshal Joffre in person to receive their orders. They did so and as they were leaving his room he called to them and said, "My sons, my sons, will you not bid your father goodbye?" and approaching them he gave each one a kiss on the cheek, the highest mark of regard and affection a Frenchman knows. The doomed youths clicked their heels together and giving their great commander their last military salute, passed through the doorway and kept their rendezvous with death.

The public have not kept informed regarding the great advances made in medicine as they have with those made in surgery. In both civil and military practice the surgeon is the hero of the day, and the internist and sanitarian are considered a lower order of being. This attitude of the laity has had its psychologic effect on the profession leading those who do not practice the mechanical art of surgery, but who deal in the more subtle intellectual processes required in the practice of modern scientific medicine to quietly acquiesce in this classification.

In times of piping peace perhaps it may be wise to complacently ignore this false conception, trusting to the slow processes of time and the education of the masses to correct it. But in times of war, with the life of a nation at stake and the civilization of the world threatened, everything in the organization of society must be correctly evaluated in the interest of efficiency. The American people today have no conception of the vastly important duties falling on the army medical officer that are in no way surgical, duties which, if not performed, may threaten even the life itself of the army, and render the latter impotent though fully equipped and trained for active service.

From a military point of view every agency is valuable in proportion to the amount it contributes to the efficiency of the fighting force. On this basis surgery is to be judged by its ability to keep fit the fighting force, by restoring to health soldiers sick of surgical diseases, by the number of mangled soldiers it saves for the auxiliary departments of the army or civil life, by the number of wounded soldiers it restores to the firing line. From a military point of

view, that portion of the wounded so seriously disabled as to be unfit for military service in spite of all that surgery has done for them, are to be disregarded. Humanity may not disregard them, but military necessity must. It matters not how brilliant the work of the surgeon may be in saving life, in restoring function, unless that life or that function can again be used as an active force against the enemy, the work has been useless from a military point of view. I am simply bringing out the point that a large part of the work of the surgeon has no strictly military value even though it be of the highest and most blessed humanitarian value. This is one of the brutal facts of war.

Wounds and surgical diseases do not play as important a part in disabling soldiers for military duty as uncombated internal disease and uncombated infectious disease. I am not unmindful of the greatly increased number of wounded nor of the greater severity of these wounds produced by present methods of warfare. So far as I know, there are no statistics available showing the per cent. of wounded returned to the firing line, under present war conditions, by the greatly improved methods of surgery.

In an army of two million men which this country proposes to raise at once, how important it is to have the best medical skill to care for the sick and restore them to duty at the earliest possible moment. What an economic waste sickness can produce in such an organization, the most expensive known to the race! Think of the vast amount of medical disease of the respiratory tract, of the digestive tract, in an army of this size, far outnumbering surgical diseases, and these diseases are present all the time, from the moment of mobilization through the period of training, through the period of active campaign, through the period of demobilization and muster out! What a vast amount of medical laboratory work is to be done, without which this tremendously costly human machine cannot receive proper medical attention! How urgent the need for the best laboratories the country can furnish to cooperate with the internist in diagnosis and treatment! What a vast amount of serious illness must necessarily develop in such a large body of men, sickness that is not preventable, that must be cared for in the best possible way by the most highly trained internists obtainable!

And, again, surgical injuries are not the only results of fighting in this war of personal physical combat and encounter. If the soldier escapes injury, the exposure to cold, wet, fatigue, physical exhaustion and nervous strain leave in their wake a long list of internal diseases that must be combated, as are his wounds, in order to restore the soldier to the fighting line. Thus on indefinitely might examples be



given of the need for the internist in war. There is always need for the medical man.

In the fields of sanitation and preventive medicine there is an immense amount of work for the army medical officer to do. It is here that medicine has rivaled surgery in the brilliant results obtained. I need only mention the conquest of typhoid fever and yellow fever. The greatest vigilance is necessary to prevent the incidence and spread of epidemic disease. Isolation, quarantine and artificial immunization must be mastered and thoroughly executed. A brief list of the subjects coming under these heads is sufficiently suggestive of the vastness of the medical work involved, water, rations, clothing, sanitary administration of camps, disposal of excreta, sewage and refuse, personal hygiene of soldier, hygiene of hot and cold climates, military morbidity and mortality, hygiene of troop trains and troop ships, posts, barracks quarters and hospitals, disposal of dead, sanitary inspection.

It seems to be the universal opinion that it is in the field of preventive medicine that the army medical officer renders the most useful service from a military point of view, and today the troops of the Medical Department of the Army, both officers and men, are known collectively as sanitary troops. A little incident is illuminating at this point. During the Spanish-American War Dr. Nicholas Senn, who had been designated as chief operating surgeon for all the armies in the field, arrived in Cuba and was met by Colonel La Garde, who apologized for the dearth of surgery in camp. Dr. Senn said, "Well, if there is no surgery to do, can I not be of service otherwise?" Colonel La Garde says: "I looked around and finally placed him in charge of about seventy Cuban refugees to clean camp. We had burned down the town of Siboney to get rid of yellow fever, and Senn, with his Cuban help, worked for days in the hot broiling sun of early July to clear away the smoldering ruins that we might have a suitable site for our hospital tents. Senn was by instinct a soldier. He had been the surgeon-general of the Illinois State troops for years, and was the founder of the Association of Military Surgeons. He was a typical, all-around medical officer, just in the way that he was famed as a surgeon the world over."

I believe I have said enough to indicate the wide field in which the internist and sanitarian of the army medical corps work. It is of great importance, requiring the exercise of talents of the highest order and of the best training. The purpose of this paper is to magnify the office of the internist and sanitarian of the army, and to point out the opportunity for distinguished service for the country which the present crisis holds out to medical men of the profession who are not doing surgical work in civil life.

## INFECTIOUS DISEASES OF THE LOWER BOWEL \*

W. H. STAUFFER, M.D.  
ST. LOUIS

A brief review of the anatomy and physiology of the lower bowel will readily convince you of the fact that many of the conditions which predispose to infection are in evidence, and were it not for the immunity generally established few persons could be found in a normal condition. The well nigh universal ignorance of what constitutes the proper personal hygiene of this organ of elimination is truly appalling.

The anal mucous membrane, at its termination in the neighborhood of the internal sphincter, is thrown into a number of longitudinal folds. This has a two-fold object: first, to accommodate itself to the narrow anal canal when contracted and, second, to allow of the dilatation of the anus without undue stretching of the mucous membrane. Between each series of folds is a depression which dips down and terminates in a little pocket. These pockets are known as the crypts of Morgagni and form a sort of semilunar valve between each column.

Between each semilunar valve is a little tactile body known as a papilla. The semilunar valves are supposed by some to secrete mucus to lubricate the anus. Occasionally foreign bodies or little particles of fecal matter find their way into these pockets and ulceration results. This ulceration may or may not terminate in abscess formation; if it does, it will usually result in a fistula. The ulceration may be slight, yet sufficient to cause considerable disturbance.

The columns of Morgagni are well adapted for the protection of blood vessels. These columns contain a vein and an artery. The vein very often becomes varicose, producing hemorrhoids. On account of this varicosity the semilunar valves are held open and, under these circumstances, are more apt to become inflamed or torn. As a result of congestion the papillae enlarge, and occasionally one sees in connection with a hemorrhoid, a sacculated valve and a very much enlarged papilla. These papillae sometimes reach relatively enormous proportions. I have seen them as large as the end of the thumb; in such cases they are true fibroid tumors.

In the normal act of defecation the lower end of the inside of the rectum is everted. The habit of cleansing the parts by infected toilet articles before the everted bowel returns is the primary cause of much rectal pathology. The pathological process is as follows: Owing to some lesion at the ano-proctodeal junction, the

\*Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

mucous membrane is weakened in its protective power; micro-organisms of various sorts abound in this region. The resistance of the patient is caught at a disadvantage, and the sub-mucous pockets serve admirably as culture tubes; thus the starting point of whatever follows.

The tissues surrounding the rectum are of low vitality and are supplied by a complicated system of lymphatics thereby providing a favorable soil and ample means for extensive infection.

A review of over three thousand cases treated for some disease of the lower bowel reveals the fact that about 90 per cent. were caused by some infectious agent, either of a constitutional or local nature.

The cause of every case of proctitis is primarily some bacterial infection of the mucous membrane the exact nature of which is not always easy to determine. Probably many different kinds of bacteria are capable under favorable conditions of causing proctitis. Owing to the large number of micro-organisms which are habitually present in the rectum even under normal conditions, the difficulty of ascertaining which is the specific cause in any individual case is manifest.

An ulceration once established becomes the stamping ground for all the bacteria that inhabit the intestinal tract. The bacillus which predominates in most cases would be very apt to continue the infection of the streptococcus or staphylococcus or any organism. I have seen cases where a gonorrheal proctitis was followed by a colitis, but the primary cause ceased to be active and could not be demonstrated.

Primary syphilis of the anus and rectum is extremely rare. The manifestations which we see in this region are usually secondary to syphilis in other parts of the body. When primary, it is usually due to unnatural practices, although accidental inoculation has occurred. The primary lesion is always a chancre, and in my experience, chancre of the anus differs from chancre in other parts of the body, in that there is rarely that induration which one sees on the external genital organs.

Chancre may be complicated with chancroids, thus making the diagnoses difficult. The character of the chancre may be so changed by a mucous infection as to take on a phagedenic character and make the case difficult of diagnosis. In a recent infection the spirocheta pallida may be demonstrated, but a Wassermann should be made in every case.

Gonorrheal ulcerations are due to an infection by the gonococcus. These are usually found within the first two or three inches of the rectum. There is nothing typical about a gonorrheal ulceration; it is superficial and irregular, parts of it usually being covered with pus and streaked with blood. A positive diag-

nosis of gonorrheal ulceration cannot be made without demonstrating the presence of the gonococcus.

Primary tuberculosis of the bowel is exceedingly rare. Usually, cases of tuberculosis of the bowel have a focus in some other part of the body. It is a well known fact that the tubercle bacilli are frequently found in the stools of individuals not necessarily suffering from tuberculosis; also, that if the vitality of the tissue is lowered, the tubercle bacilli will find a resting place, even though other micro-organisms are the primary cause of the trouble.

It is possible in tuberculous abscesses to find tubercle bacilli in pure cultures, but once the abscess is open a mixed infection results. On the other hand, a colon bacillus around the rectum in tuberculous subjects may subsequently become infected with the tubercle bacilli; but in neither case would we be correct in assuming that the secondary infection is the primary cause.

It is a well established fact that the hydrochloric acid of the gastric juice destroys most bacteria, and, as shown by Cushing, the stomach is practically sterile after a meal; this applies, of course, to healthy individuals; but in those who suffer from pulmonary tuberculosis, and who are constantly swallowing the tubercle bacilli, the gastric juice must obviously allow a certain number of bacteria to escape. As a rule, tuberculous subjects do not have a good digestive apparatus, and the intestinal canal of such individuals contains numerous tubercle bacilli. This accounts for the fact that about 50 per cent. of cases of pulmonary tuberculosis have a secondary infection of the bowel.

Previous to the Spanish-American War amebic infection was considered a disease of the tropics. It was thought to be so rare that we never looked for the organism in diarrheal conditions unless the patient had dwelt in a southern latitude; suspicion never rested on those who had passed all their days in a temperate climate. Most of us can recall cases of intractable diarrhea that failed to respond to internal medication. Some of the worst cases that I have treated have never been outside of the temperate zone.

At the present time this disease is endemic in this country, and so far as I can see from the reports of competent observers, it is steadily increasing. The question arises whether this affliction has always been endemic in the United States or whether we have failed to look for the causative factor. This can only be determined by future investigations.

The medical literature of recent years on this very interesting disease is voluminous and well worth your perusal. Losch, in 1875, was the first to describe the ameba which inhabits the intestines of man. Since then various investigators have described the ameba of dysentery with some differences of opinion as to its size,



shape and morphology. We can now see why such differences exist in the light of the researches of Craig and Schaudinn, who have given a clear description of two distinct species of amebae, the *entameba coli* and the *entameba histolytica*.

The symptoms of amebic ulceration of the large intestine do not differ from those due to ulceration from other causes. It becomes our duty, therefore, in every case to institute a thorough local examination both to determine the site and extent of the trouble and differentiate its exact nature. It is notably true of this affection that the rectum and pelvic colon are practically always involved, certain of its most distressing symptoms being primarily due to this fact.

To an experienced observer the clinical picture is often sufficient for a diagnosis; however, it is always advisable that the confirmatory evidence of the microscope be sought in every case. This involves no great outlay of time or trouble and requires no special laboratory training. It is only necessary that the slide be warmed to approximately body temperature, and the cover glass pressed well down on the specimen so as to spread it thinly and uniformly.

The only reliable method of obtaining a specimen is by curetting an ulcer under direct inspection through the proctoscope, the scraping being transferred to a slide and handled as though it were merely mucus. If the case is one of amebic infection the organisms will rarely fail to appear in such a specimen. It is worthy of emphasis, however, that too great weight is not to be attached to negative findings even after repeated examinations. The therapeutic test properly applied will generally be conclusive in a few days.

Most of the catarrhal diseases of the colon and lower bowel are caused by some infective agent. Proctitis is frequently the cause of constipation and mucocolitis. The improper use of the enema is often responsible for the extension of the pathological condition. As an etiological factor in producing appendicitis it is worthy of consideration.

Any pathological condition causing fixation of any portion of the colon, though only partial, is necessarily attended by retardation of peristalsis with the result that the bowel is exposed to increased traumatism from within as well as from without. In this way inflammation of the mucosa is induced, and mucous and membranous colitis, which are merely advanced stages of the inflammatory process, follow. The sites at which adhesions are most frequently encountered are the cecal region, the gall bladder region and the sigmoid loop of the pelvic colon by extension of the inflammatory process from the pelvic organs. Mucous stools are often a sign of a latent appendicitis.

The methods to be employed for the restoration of normal function depend on the etiological factors and the environment of the patient.

In no department of medicine is a proper diagnosis more essential, and the patient and pathological factors in each case should be carefully scrutinized. Sufficient time should be taken to insure a definite opinion. It is only by this method that we can hope to have the co-operation of our patient, which is so imperative for satisfactory results.

The dietetic factor is exceedingly important and often involves an entire change of habits and environment. The habitual use of cathartics is only mentioned to be condemned.

The use and abuse of rectal irrigations, enemas and colonic flushings must be definitely outlined and properly administered. A rectal irrigation of a mild unirritating nature should precede every enema or colonic flushing. The rectum should not be used for the purpose of medication or alimentation. If properly prepared, it may be utilized as a means of administering water or saline solution when indicated.

As a prophylactic measure I would suggest that the proper hygiene of the organs of elimination should be taught in our public schools. The care of the teeth and throats of our children has very properly been the subject of much discussion, and there is no legitimate reason why the human terminal facilities should not receive a like consideration.

537 North Grand Avenue.

#### DISCUSSION

DR. ST. ELMO SANDERS, Kansas City: The doctor has been very lucid in his description and he has called our attention very clearly to several conditions. However, there is one point that I would like to question. The essayist has spoken of the sinuses of Morgagni as if their normal appearance was a settled fact. Now there are some present day authorities who deny that these are really normal structures and state that they are always pathologic structures, the theory being that the mucous membrane, on account of repeated movements of the bowels in large, hard masses, is forced out between the columns of muscles and in that way making the so-called "sinuses of Morgagni." They are found only at that one location, just beyond the point where the internal sphincter seems to begin to lead off and the longitudinal fibers of the muscles are not yet well formed; so there is some chance for that theory to at least have some excuse for existing.

I was somewhat surprised that the doctor did not place much emphasis on strictures of the rectum, although he did show a very beautiful picture of the condition. These strictures are caused by syphilis, and if there is anything more unattractive to handle than a stricture of the rectum, I do not know what it is. They are seen practically without an exception in prostitutes who neglect themselves, have probably had a proctitis, gonorrheal in character, and are also syphilitic, and about the only thing that you can do for them is to continually perform dilatation, which will afford the patient a little relief. It does not cure the stricture, which indeed becomes steadily harder and more resistant, but it is the only thing that you can do for them. Specific medication seems

to have no effect on the condition, whether administered in the old or in the new forms.

We constantly speak of the rectum as being the habitat of all kinds of germs but according to some pathologists there are not one third the number of germs in the rectum that are found in the mouth. In other words, the germs have a long way to travel before they reach the rectum and I believe that the doctor is right in saying that proctitis is generally the result of deficiency of personal hygiene in trying to remove the small amount of defecation before the rectal mucosa has had time to return to its proper location.

DR. WILLIAM H. STAUFFER, St. Louis, closing: The crypts of Morgagni are normal but may become diseased. After a Whitehead operation you will find on examining these cases that the crypts and columns return in about six months' time. It is just as reasonable that they should be there as that there should be a puckering when you put a draw string around a pouch. We have got to have that puckering to take up the slack in order to afford sufficient space for the bowel movements. The point that I wish to make is the danger of infection through improper personal hygiene.

The subject of stricture of the rectum is a large one, and had I elaborated on that I should not have been able to show any of my slides. The condition, as the doctor remarks, is one that we all dislike to treat. I think there is no class of work that comes into a doctor's office which he would rather see go somewhere else. I might offer the doctor some encouragement, however, with reference to the treatment of stricture of the rectum. What he said about medication is certainly true, but some good results have recently been obtained in these cases by performing a colotomy. You will be surprised to find what can be accomplished by putting that part of the anatomy at rest for six months or a year. It is well worth trying.

With reference to the number of bacteria, the doctor's remark is in perfect accord with what I wished to convey.

#### TYPHOID PERFORATION, WITH REPORT OF A CASE ON THE 116TH DAY WITH RECOVERY

EDWIN SCHISLER, M.D.  
ST. LOUIS

In typhoid fever when abdominal pain is present one should always be on guard for perforation and treat symptomatically; for when perforation occurs, pain is temporarily relieved, but the relief is due only to the incapability of perception which accompanies the shock by this condition, pulse generally increases in rapidity and becomes weak and thready. The temperature first falls to subnormal and then rises as infection and generalized peritonitis set in. Any localized tenderness which may have been present before the perforation now becomes diffused and muscular rigidity, which before was restricted to one area, now becomes general.

The earliest, most important, most suggestive symptom is pain. In the very great majority of cases its onset is sudden and severe. It is generally referred to the lower abdomen and often rather to the right of the median line; excep-

tionally it is slight or even absent, especially when patient is apathetic. The location of pain is dependent in part on its location, but sometimes is referred to unusual locations, as the end of the penis, the perineum or the epigastrium, left hypochondriac region, explained only by a like condition so often met with in chronic retrocecal appendix—mainly accumulation of gases in the splenic flexure of the colon. Vomiting is by no means a constant symptom, but when present for the first time in connection with pain and tenderness is significant. In Manges' series of nineteen cases of typhoid perforation, abdominal pain was the symptom to appear in fourteen; in two of them, however, it was accompanied by a chill, and in two others vomiting. Though the vomiting was not the initial symptom, it was present in seventeen of the nineteen cases.

One of the best descriptions of pain due to typhoid perforation is given by Selby.<sup>1</sup> He says, that abdominal pain is a most constant and reliable indication of perforation, depending, to be sure, on the mental condition of the patient and his appreciation of sensation. The pain varies in degree, character and location. It may be so severe as to force a cry from a comatose patient, and on the other hand so mild as to attract but a slight or no attention from a conscious one. The value of pain, first localized and then later becomes generalized as peritonitis sets in.

Perforation is the most important and the most fatal complication. Its frequency has been estimated at one fourth of eleven per cent. The most common time for perforation to occur is between the fourteenth and twenty-first day. It has been reported as occurring as late as the seventy-second, seventy-sixth and one hundred and tenth day. Mitchell<sup>2</sup> reported eight cases of typhoid perforation on which he operated, with a mortality of 57.1 per cent., the symptoms appearing on the tenth and the thirty-sixth day.

Von Leyden's suggestion, in 1884, that surgical means was the only way of treating perforations of the stomach and intestines came at a time when surgical technic justified its acceptance. The same year Milkulicz closed a typhoid perforation by suture in a male 40 years of age.

One of the earliest papers on intestinal perforation in typhoid was published in 1891 by Van Hook.<sup>3</sup> Keen then reports three cases which were operated with recovery. Holscher, in 2,000 fatal typhoid cases, found 114 perforations, or 5.7 per cent. Osler found in eighty typhoid autopsies, twenty perforations, or 25 per cent. In the Montreal General Hospital, during eight years, there were 1,405 cases of typhoid, with seventy perforations, or 4.98 per cent. Harte and Ashhurst<sup>4</sup> report 8,881 cases,

1. Selby: The Diagnosis of Perforation of the Bowel in Typhoid, *Jour. Am. Med. Assn.*, **10**, 43.

2. Mitchell: *Annals of Surgery*, March, 1904.

3. Van Hook: *Medical News*.

4. Harte and Ashurst: *Annals of Surgery*.



with 225 perforations, or 2.54 per cent., which would seem to represent a fair average.

The frequency with which perforation occurs in typhoid fever is illustrated by the recent statistics collected by Scott.<sup>5</sup> He estimates that about one third of the deaths in this disease occurs from perforation. In 3,006 cases the general mortality was 8.05 per cent., while the mortality from perforation among these was 2.58 per cent.; of sixty cases operated on, thirteen recovered.

More correct estimate of the percentage of recoveries after operation is obtained by analyzing the figures of the hospitals in which all the cases of perforation are included. If this be done, 25 per cent. of recoveries will be found to be a fair estimate of what has been attained up to the present. It should be observed that these figures represent the percentage of recoveries in the cases operated on—for example, Meakins<sup>6</sup> reports the results obtained in the Royal Victoria Hospital during ten years. There were admitted 1,230 cases of typhoid fever; perforations occurred in thirty-two, or 2.6 per cent. Twenty of these thirty cases were operated on, and five recovered, or 25 per cent., but only 15.6 per cent. of the total number of perforations recovered in those without surgical interference.

Now, if the mortality in typhoid from perforation is about 20 to 30 per cent. as estimated, then we have reduced it by half in the cases operated on, but there is an enormous number still allowed to die for the want of surgical care and a more careful diagnosis.

**CASE.**—Patient a poorly nourished female, aged 14, entering July 6, conscious, suffering no pain, with a history of being sick for six days with fever, which started with chills followed by sweats, no vomiting. Examination showed herpes on lips, pharyngeal discharge, dullness over right lung, many coarse râles over both lungs. Abdomen, no tenderness, liver extending 3 cm. below the ribs, small red macules in upper left quadrant. Extremities negative. Temperature 103.2, pulse regular, 120, respiration 36. On entrance blood showed 7,400 leukocytes, 3,260,000 red cells, no malarial organisms, Widal reaction positive; repeated blood cultures were made which were negative, sputum was examined for tubercle bacilli with no result. Urine negative. Diagnosis: typhoid fever. Left hospital on October 10, making an uneventful recovery.

Re-enters hospital on October 27, conscious, complaining of great abdominal pain with a pulse 132, temperature 101.6, respiration 40, with a history of being suddenly seized with a severe pain in lower abdomen, followed by vomiting, twelve hours previous. Examination showed abdomen rigid but no distention, severe pain over entire lower abdomen which is increased on pressure. Pain more severe over right lower abdomen and has vomited a foul smelling vomitus; bowels have moved twice since acute pain. Diagnosis: typhoid perforation.

**Treatment.**—Vertical incision at the outer border of right rectus. Peritoneum incised, revealing a thin yellow fluid containing gas bubbles. Exploration showed source of leakage to be a pinhead size per-

forating ulcer of the ileum at a distance of about six inches from the ilcoecal valve, very small quantity of plastic exudate; practically no attempt at walling off; moderate, acute, general peritonitis. Ulcer was closed by an inverting purse string suture, reinforced by a few whipover stitches, suprapubic stab drain, cigarette drain inserted into pelvis. Second drain was inserted through original incision into right iliac fossa and a third to the right kidney region. Abdominal incision closed in layers with catgut, through and through reinforcing silkworm sutures being inserted and clips being used for the skin.

Diagnosis: Perforating typhoid intestinal ulcer. Operator, W. M. Leighton. Patient left hospital, November 27, making an uneventful recovery.

2600 South Grand Avenue.

#### DISCUSSION

**DR. J. C. LYTER:** I think we will all admit that one of the most difficult things in the field of diagnosis is to diagnose, in some cases, perforation in the course of typhoid fever. The points he has outlined are stated to be the criteria by which we are to be guided in making this diagnosis. We have all found at times that those criteria are insufficient and we pass over a great many cases of typhoid perforation which have been verified at necropsy.

I think that we would recognize more of these cases and we would appreciate the fact that there is more perforation in typhoid fever if we were to watch the blood picture a little closer. In typhoid fever, as a rule, there is a leukopenia which exists throughout the course of typhoid fever unless there is some complication as perforation or the bacilli becoming localized in some other focus. Under those conditions there immediately develops a leukocytosis.

My experience with perforations that I recognized has been rather limited; I can recall only two cases. The factor that has always appealed to me, and the factor that assisted me more than anything else in these cases was watching the blood picture. In typhoid fever, as in pneumonia and other infectious diseases, we should keep a close watch on the leukocytic picture because immediately perforation takes place there is a leukocytosis. That means that there is some atypical course of the typhoid fever. An increase of pain or some other symptoms that would attract attention to the abdomen we would be able to make an earlier and more accurate diagnosis of a perforation.

I had occasion to demonstrate the value of a leukocytosis in typhoid less than a year ago. A case had progressed with a perfectly normal course of typhoid, leukocyte count of 4,000 to 6,000. One day the patient developed a little rise in temperature, no specific chill, no pain to speak of anywhere, but on doing a white blood count we found that he had something like 14,000. A few days after that he developed a typical picture of typhoid pleurisy, went on to effusion, was aspirated and recovered. I believe we could adopt the same plan in examining our patients for perforation.

I can hardly take the stand that the doctor does with regard to the controlling of hemorrhage in typhoid fever. In fact, I believe that there is no case of typhoid fever which does not hemorrhage more or less. There are ulcerative processes in the intestine and it is quite natural that there should be some hemorrhage. In the mass of these hemorrhages, however, I fail to see where our surgeons would be of much value to us. In the first place, the hemorrhage is usually from no definite point in the intestinal tract as far as the surgeon would be able to define even after he had opened the abdomen, and I think the surgeon would do more damage than good by going in and searching for it.

**DR. FRANCIS REDER:** Ever since the closer cooperation of physician and surgeon in the treatment of typhoid fever the death rate from perforation has

5. Scott: N. Y. Medical Journal.

6. Meakins: Montreal Medical Journal.

been reduced. The place for the typhoid fever patient is in a hospital for the reason that it cannot be said whether this patient will or will not suffer a perforation. It is true the percentage swings around 2 to 4 per cent. of all cases of enterica, a low percentage indeed, but we do not know what case will be carried into this danger zone. When a perforation has taken place, and it is necessary that this accident be diagnosed early, it becomes absolutely necessary that a laparotomy be performed promptly. Patients having suffered a perforation usually die in the first twenty-four or forty-eight hours. An operation may save the patient's life.

I do not wish to be interpreted as saying that all typhoid patients who suffer a perforation die. Nature frequently comes to the rescue and seals the perforation with lymph, agglutinating the perforated part of the intestine to some neighboring intestinal coil and in this manner is making an effort to save the peritoneal cavity from infection. I doubt if many of these perforations recover.

But viewing the perforation from a surgical angle, we must take into consideration when the accident has happened. For instance a perforation which takes place when the patient is at the height of a severe attack, is always serious enough to be considered hopeless. Again a perforation which takes place during convalescence, or where a mild relapse has occurred, such a case as Dr. Schisler has cited, will give promise of a recovery. I recall two cases of typhoid perforation occurring in the height of the attack, that were diagnosed promptly by the internist. The perforations were readily found on section. These two patients died. A third case was one where the perforation occurred during the convalescent stage. This patient was operated on and recovered.

There are other conditions that must be taken into consideration when operating for perforation. For instance, the size and number of perforations. The condition of the bowel where the perforation has occurred must be carefully noted. If the bowel wall is sufficiently strong to hold the suture the openings should be closed with a Lembert suture in a manner best suited to the case. The bowel lumen must not be narrowed too much. However, if the tissues are edematous or even gangrenous, suture is out of the question and the interests of the patient are served best by simply bringing the loop of intestine with the perforation out of the abdomen, keeping it there and awaiting the outcome of the disease. If the patient recovers the continuity of the bowel can be easily restored.

However, it is not the perforation alone that is to be considered. The extravasation of the bowel contents which has taken place and which is loaded with virulent bacteria, must, if the patient's condition permits, be gotten rid of. It is still a debatable question with a few surgeons whether to carry out the plan of irrigation or of mopping or simply leaving the patient alone and trusting to drainage. The patient's condition permitting, I would favor the plan of a thorough lavage of the abdominal cavity. A thorough lavage is best accomplished by means of a tube three-quarters inch in diameter, low pressure, either with a one-half normal solution or simply sterile water. Beginning at the ileocecal valve, washing along the colon, down the sigmoid, to the rectum and with the hand inside the abdominal cavity executing a sort of puddling motion, all of the coils of the small intestine along the mesenteric base, the whole of the abdominal cavity can be liberally flushed in a short time. To be able to do this effectively the incision must be placed in the median line and not in the semilunar line and the tube used for flushing should be very soft so that it can be easily and harmlessly handled within the abdominal cavity.

DR. W. C. G. KIRCHNER: A number of years ago when Dr. Keen came to St. Louis to speak of this

condition—and Dr. Keen at that time was perhaps our greatest authority—in the discussion of his paper one of the doctors of quite extensive experience, said, "Why, here in St. Louis we do not meet these typhoid perforations." Dr. Keen said in closing, "Happy St. Louis, in which they can catch the boddlers and cannot catch the typhoid perforation." That marks the time at which he paid a visit to St. Louis. The fact is that at that very time we, at the City Hospital, were operating on typhoid perforations.

In my own experience I have found that the pain was one of the important symptoms to which we pay attention in the treatment of typhoid fever. Combined with our observation of that point, we ought to have a daily examination of our patient, careful, but not so that we would by the massage cause injury. In addition, we should watch the leukocyte count. We all know now that in typhoid fever we have a leukopenia and without knowing the, let us say, normal count for that particular case we would be at a loss to note any variation. Therefore, the daily count, or a count at regular intervals, is a very important thing, and any special rise in this leukocyte count will tell us when we have a pneumonia or a pleurisy or a peritonitis impending.

The pain and the leukocyte count are among the chief things that tell of a perforation. Usually there is also a rise in the pulse rate. The other symptoms that are mentioned in the textbooks I think are of little value as far as surgical intervention goes, because they are terminal symptoms and when we operate in typhoid fever with terminal symptoms present the outcome is not good.

The operative procedure, of course, depends on the method the surgeon plans for himself. I have tried several methods and my conclusion is that the less we do in these cases the better for our patient. In other words, any undue handling of the intestines is injurious. Most of these perforations take place in the ileum near the cecum, and that is, then, our chief guide as to the location of the incision.

In my earlier experience, I thought that copious flushing was the proper thing to do, and indeed the patient is temporarily greatly improved. I have taken such cases of typhoid perforation and have flushed them in the manner that Dr. Reder has described. The immediate improvement is quite pronounced. The patient even on the next day feels very much better, but the subsequent course is not very much improved, because the fecal matter which was present in the abdomen finds its way into other parts of the abdominal cavity and in flushing it is, I think, impossible to remove these different foci of infection. Therefore, I have abandoned this method of treatment.

Under inspection these typhoid ulcers appear differently. Some of them are hard and nodular, with in the center a sort of sievelike arrangement of pinpoint perforations. These will give pain when they leak, but are very difficult to suture. These perforations also will sometimes heal themselves if another portion of bowel or the omentum agglutinates and closes over the perforation. At other times, an ulcer perforates so that you can put a pencil through it and there is a copious discharge of fecal matter. There we have a different thing to deal with and it is better in this instance to bring up a loop of bowel and to make a fecal fistula when closure of the perforation is difficult. The drainage in these cases should, I think, be ample, and in time the fecal extravasation will work its way through the point of drainage.

DR. SCHISLER, closing: The question of leukocytosis in these cases is of importance and I am glad that Dr. Lyter mentioned it. In many cases of perforation the blood count may be of aid, frequently the normal leukopenia of typhoid being replaced by a gradually increasing leukocytosis.



## THE SIGNIFICANCE OF ANGIOSCLEROSIS OF THE RETINAL BLOOD-VESSELS\*

HERBERT MOULTON, M.D.  
FORT SMITH, ARK.

Arteriosclerosis, or more properly angiosclerosis, is a disease which may affect any of the blood-vessels of the body. It is characteristic of advanced life but may be found at any age. Among fifty old people whom Hirschberg examined for refraction, twenty-five had arteriosclerosis of the retinal vessels. It is common among muscular hard-working people and those subject to emotions and worry because it is found that frequent fluctuations in blood-pressure and variations in vascular distention predispose to the disease. This has been proved by Klotz<sup>1</sup> in experiments on rabbits in the laboratory. It is more common in men than in women. Heredity plays an important part. Gout, articular rheumatism, syphilis, chronic nephritis and diabetes are recognized causes. Arteriosclerosis is often charged to toxicity of the blood from lead, alcohol, tobacco and other drugs. Auto-intoxication is given a prominent place by some. It follows some of the acute diseases, such as influenza, typhoid, erysipelas, scarlatina, measles, etc., and in such cases is held sometimes (Edwards) to cause death.

Thomas is an authority much quoted regarding the pathologic changes which take place in the blood-vessels themselves. Briefly, according to Oatman,<sup>2</sup> the first changes are a thinning and dilation of the vessel walls, due to loss of normal elasticity. This is soon arrested by a compensatory proliferation and thickening of the intima, media, and adventitia of the vessel walls. With this comes the stage of vascular rigidity and degeneration. It is supposed that the disease starts in the intima, but necropsies at this stage are rare. The disease is erratic, appearing in one part of the body and not in others in a very capricious way. Some of the vessels of an organ may be atheromatous, others not. Part of a vessel may be diseased, other parts healthy. The radial artery may be normal and the small vessels supplying some of the muscles of the brain or the retina may be affected.

The blood-vessels which may be examined in the living are few, such as the radial and temporal arteries and these only by touch. The only blood-vessels which in the living human body are open to inspection by the eye are those of the retina. With the ophthalmoscope these can be seen with the utmost distinctness in detail and under a magnification of about three diameters due to the refraction of the cornea

and other media through which they are viewed. Hence the importance of observing the retinal circulation in connection with general disease.

The early manifestations of arteriosclerosis can often be seen in the retinal vessels before they are observed in any of the vessels exposed to tactile examination or before they are manifested by any of the general symptoms of the disease. Of course the retinal examination will not reveal all cases because, as before intimated, the retina may not be affected while other inaccessible organs may be. But if true as Hirschberg declares that 50 per cent. of old people, and according to others a higher per cent. show atheroma of the retinal vessels, it is well to be watchful for whatever information can be obtained by ophthalmoscopic examination.

Patients do not often if ever present themselves for such examination in the early stage when the discovery of sclerosis of the vessels would serve as a warning, for the reason that vision is not impaired by the disease except late in its course and suddenly. The disease often runs a protracted course before symptoms arise which prompt the patient to consult his physician who might otherwise request such examination. But it behooves us who are working daily with the ophthalmoscope to make our routine examinations thorough so that such cases as possible may be detected and warned by a timely reference to their family physician, thus deferring sometimes if not preventing an impending disaster. All are agreed, I believe, that arteriosclerosis may, in its early stages, often be arrested.

In health the blood-vessel walls of the retina are transparent, hence invisible. We see merely the column of blood in circulation. There is a light streak along the surface of the vessels due to the reflection of light from the surface of the wall. The vessels are smooth. When arteriosclerosis attacks these vessels, if observed in the early stage, we see them dilated and tortuous. The observation applies to veins and arteries alike, one or both, for the disease may show first in the arteries, or first in the veins, though most frequently in the arteries. It may appear in one vessel while a part of the vessel and all other vessels may be normal. The dilation is due to loss of elasticity. Also the tortuosity is due to the same cause, for the relaxed tissue allows the vessel to stretch and become elongated. As the eyeball cannot stretch, the vessel bends on itself and becomes tortuous. There is also at this stage often observed what is termed "locomotion pulse," which is to be distinguished from pulsation due to simple alternate distension and retraction of the vessel walls. The latter is observed in low blood-pressure and glaucoma. This "locomotion pulse" is characterized by a slight lateral displacement of the whole vessel, especially at the

\* Read before the Kansas City Eye, Ear, Nose and Throat Club, April 5, 1917.

1. Klotz: *Am. Jour. Med. Sc.*, October, 1909.

2. Oatman: *Ophthalmology*, July, 1912.

bends, and is arterial. Later, sometimes but not always, the vessel wall becomes opaque, but not so completely but that the blood stream can be seen through it. The vessel wall is visible as a filmy line along each side of the blood column. If a vein passes under a normal artery the vein is visible right up to the arterial stream on either side of it, but if the arterial vessel wall is opaque the vein will disappear for a very short space on either side of the arterial stream.

In examining the fundus of the eye these crossings of the vessels should be sought and studied closely for the sake of the observation just noted. Also, later on, when compensatory thickening and rigidity have been established in the arteries another observation of value may be made at these crossings. The arteries are now much harder than the veins, and where an artery crosses a vein it will compress the vein and produce a narrowing of the caliber of the vein and a thinning of the bloodstream on its central side, while the distal side will be dilated and tortuous.

In advanced arteriosclerosis blood pressure becomes high. This is supposed to account for the irregular dilation, especially of the arteries, which become distended not at the spots which are sclerosed but the comparatively healthy areas between the parts which are sclerosed and thickened. The bloodstream is often narrowed by the thickened intima which irregularly encroaches on the caliber of the vessel. Thus in the late stages the vessels appear very irregular in size. Often some of them become obliterated by the proliferation inwards of the cells of the intima and media. Atheromatous vessels of the retina are generally a lighter color than normal and the light streak more pronounced.

Hemorrhages from the retinal vessels during the early stage of relaxation are strangely rare. Later they are frequent and often bring the patient for consultation.

A subject of this nature does not always impress us with its importance until some striking illustration in practice presents itself.

Retinal hemorrhage in the aged is always suggestive of vascular disease and should lead to investigation. It is naturally a warning of possible cerebral hemorrhage, or thrombosis. Mrs. C., aged more than 70 years, in June, 1911, complained of seeing a bunch of wires constantly before right eye. Objective examination showed a small retinal hemorrhage with filaments floating in the vitreous. The vessels near the disc were irregular in outline, but no compression at the crossings could be made out. The walls of the vessels were not visible, yet the vessels were whiter and less distinct than normal in both eyes. The radial artery was hard and noncompressible. Blood-pressure not recorded. A diagnosis of advanced arteriosclerosis was made and her phy-

sician informed of the condition. Six months later true to the warning she was attacked with right hemiplegia and died about a year after.

Of course in the advanced stage of the disease, especially in old people, nothing is of much avail to retard the progress of the disease. More fortunate are those younger in life who present themselves in the early stages. Such a case was that of Mrs. W., aged 48, who had syphilitic angiosclerosis with hemorrhage into the vitreous of the right eye. In December, 1910, appropriate treatment by her physician cleared not only the vision from counting fingers at 2 feet to normal, but has fully restored her general health from a condition in which she was threatened with paralysis.

I have recently observed a very interesting case from a neighboring city: Mr. F. G. L., aged 52, came on Feb. 16, 1914, with Ménière's disease. He had had a hemorrhage into the labyrinth of the right ear. The routine examination revealed urine heavy with sugar; specific gravity, 1.042. Blood pressure, 180. The vision was slightly below normal. The retinal vessels in both eyes were tortuous, irregular and dilated. The compression of the veins by the arteries at two or three of the crossings in each eye was well marked. There was no rupture of any vessel. In this case diagnosis of vascular disease suggested by the history of the labyrinthine disease was confirmed by the ophthalmoscopic findings. High blood-pressure belongs to the advanced stage in which this case was observed. Diabetes may have been the cause or the result of the vascular disease. Edwards (textbook) ascribes to diabetes this double rôle. But the association makes the case doubly interesting. The patient at the end of three years is alive and comparatively well.

Many cases showing the value of the study of the retinal vessels might be cited. But I hope sufficient has been said to emphasize properly the importance of a careful survey of every ophthalmic case which presents.

---

THE Health Department of the City of New York states that a number of unscrupulous physicians in the city, apparently for the most discreditable reasons, have deliberately altered the free Wassermann reports furnished them by the department's laboratory and have exhibited such false reports to their patients, although it was expressly agreed that such reports would be given only to physicians and under no circumstances to the patients. In one case the physician changed a plus minus report to read four plus. In another case four plus was changed to read plus minus, and similar changes were made in reports furnished in still other cases. The department announced that it will take drastic action in the next case of this sort which comes to its attention. No condemnation can be too severe for the physician who would resort to such practices. It would seem incredible that such things could be done, but proof is in its hands. The department will have the unanimous support of the physicians of the community in taking the most drastic action against any physician guilty of such contemptible practices.—*New York Medical Journal*.



# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

SEPTEMBER, 1917

### EDITORIALS

#### THREATS TO DRAFT PHYSICIANS NOT WARRANTED

From time to time we have been asked whether there was any foundation for the rumors that doctors would be drafted for Army service; and if it was true that the medical profession had failed to respond to the call of the country as promptly as it should have done. To the former question we could make no definite answer, because there seemed to be no reliable information obtainable anywhere. To the latter question we have always answered that it was our belief that the profession is responding nobly to the call for doctors—and events confirm this belief. We read in the *Journal of the American Medical Association* for August 11 that the number of physicians who have volunteered is well up toward the quota the War Department has said would be needed. Under the caption "No Need for Drafting the Medical Profession," in the editorial columns of the issue mentioned, *The Journal of the American Medical Association* presents some very illuminating data on this subject, and for the benefit of those members who have not read the article we quote:

It is to be regretted that there has been so much hysteria in regard to procuring the medical force of the new National Army. It is still more to be regretted that this hysteria—absolutely undeservedly—has reflected unfavorably on the medical profession. As late as August 1 the Associated Press sent out a statement to the effect that a petition was being circulated which "declares that the method of recruiting the Medical Corps of the army by commissioning reserve officers in that corps who volunteer has proved a failure and asks that in behalf of the welfare of the nation a draft for physicians be made."

This is merely an echo of what many men with the best motives have advocated. It is based on the assumption that the newspapers have had correct figures regarding the number of men who have accepted commissions in the Medical Reserve Corps, and that the medical profession was not responding to the call. Even within the last two weeks, statements have appeared in the newspapers, apparently from authoritative sources, to the effect that less than 3,000 physicians have accepted commissions in the Medical Reserve Corps.

What are the facts? On August 4 approximately 16,000 physicians had offered their services and had made application for commission in the Medical Reserve Corps. Of this number, nearly 14,000 had been recommended for commissions. Some of the remaining 2,000 applications were pending; others had been rejected for cause. Of the 14,000 commissions recommended, nearly 9,000 had been accepted. This leaves about 5,000 applications which may be accounted for as follows: 1,300 were pending in the adjutant general's office; an uncertain number had been sent out too recently to allow for the acceptance to be returned; some who had received commissions were delaying—for various causes—in sending in the acceptances. What proportion of this group will finally accept their commissions is problematical; but based on information which we believe to be reliable, we confidently assert that there are at the present time at least 13,000—probably 14,000 is nearer the correct number—physicians ready when called on for active service. These figures do not include physicians who have entered the regular Medical Corps during the last few months, or those connected with the National Guard, the latter at least 1,000 in number. Moreover, from 100 to 150 new applications are reaching the surgeon general's office daily. To advocate a special draft of physicians under these circumstances is an insinuation against the medical profession which should be insistently resented.

We repeat: The physicians of this country have been and are offering their services, at tremendous sacrifices in many instances, and are doing their full duty without compulsion and without a special draft. We are confident that not only the present, but every future need which the country may have for medical men will be supplied by our profession, without coercion or threats.

We have made unsuccessful efforts to ascertain the number of physicians from Missouri who have applied for commissions in the Medical Reserve Corps, but we are informed that the number from St. Louis equals 17 per cent. of the total number registered in that city. It is probable that the number from the entire state will equal if not exceed that proportion.

#### GUARDING THE SOLDIERS' MORALS

History has the annoying habit of repeating itself, except when men profit by past experiences and deliberately act to prevent the repetition of past occurrences. The history of every war has been that immorality and venereal disease follows in its wake chiefly because men in camp and on the march away from the restricting as well as constructive influences of home life, give way more readily to the temptations surrounding and following the army. Then with the disbanding of the army, loose morals, vicious practices and venereal disease, acquired while in service, are carried back to the homes of the men. The spread of syphilis and gonorrhea after the Civil War has been

properly designated as epidemic. Military authorities of the German, Austrian and Allied forces recognize that the "Venereal Peril" is perhaps the greatest menace to the men other than the actual warfare.

For the first time in history a great nation at war has adopted a definite course looking toward the protection of the health and morals of its soldiers. The Committee of Hygiene and Sanitation some weeks ago adopted resolutions prohibiting the sale of liquor to soldiers near camps, excluding prostitutes within an effective zone, providing for adequate prophylactic and remedial treatment of venereal disease and recognizing that "sexual continence is compatible with health and that it is the best prevention of venereal disease."

The Secretary of the Army and the Secretary of the Navy are both strenuously insisting on carrying out this program, and if we are to judge by past achievements of the Army and Navy in the prevention of disease we are justified in predicting that prostitution will not follow the army in this war and that venereal disease will not become the scourge and menace after the men disband that it has always been before.

When large numbers of men are removed from their accustomed vocations and surroundings and placed in barracks where they associate only with other men, the temptations of vice become more subtle and dangerous. The influence of liquor on the actions of men is most pernicious in that it lessens resistance and restraint. When the temptations of liquor and vice are deliberately flaunted in the faces of such men when away from camp or on furlough the consequences are found to be grave. It is true that the sex impulse is a powerful one and that continence for young men is but a compromise, though a very necessary one. However, it has been demonstrated beyond any doubt that continence is possible and that it is the best protection against venereal disease.

Artificial prophylaxis as practiced in the Army has been accused of being an encouragement to immoral practices in that the restraints of fear are removed. In an interesting "Analysis of Results Observed at the Naval Training Station, Norfolk, Virginia," Dr. Charles E. Riggs, Medical Inspector of the United States Navy, comes to the following conclusions: (1) At this station commercialized vice was responsible for at least 85 per cent. of venereal disease; (2) educational prophylaxis is the most important branch of the venereal prophylactic propaganda, and in a sense includes all other branches; (3) medical prophylaxis is remark-

ably efficient and should be used when the way has been opened by educational prophylaxis as it does not then tend to promote incontinence.

Table 2 submitted by Dr. Riggs is interesting:

	Average Complement	No. Taking Prophylactic Treatment	Per- centage
First 5 months .....	794	1,006	126.7
Second 5 months .....	783	515	65.7
Third 5 months .....	618	309	50.0
Fourth 5 months .....	798	531	66.5
Fifth 5 months .....	468	458	97.8
Sixth 5 months .....	919	352	38.6

It will be noticed that the percentage of exposures dropped in the second period from 126 to 65. It was in the second period that lectures on sex hygiene began. In the fifth period a decided increase in the percentage of exposures is noted. This is explained by pointing out that the law closing the red light district in Norfolk took effect on the last day of June, that is, the beginning of the sixth period. This fact had been widely advertised in advance and "it probably had enticed many there to see what they believed they would never have another opportunity to see."

In the sixth period the percentage dropped to 38.6.

The writer recently visited a regiment of National Guardsmen in one of the large cities of Ohio. This regiment is now encamped in a public park within walking distance of one of the most notorious segregated districts in the country. The force numbers 2,000 men and on inquiry it developed that during the month of May, 1917, only thirty prophylactic treatments had been given, or an average of one per day. During the same month there were three cases of gonorrhea and one suspicious of syphilis. Such a record could hardly be duplicated in a civilian group of men of the same age. The chief medical officer stated that on the return of his regiment from the Mexican border last fall there was not a single case of venereal disease in the regiment. He explained this by saying that those cases which were disbanded because of their venereal disease had been discharged or left in base hospitals and that the mild infections were intensively treated so that there was not a single case on their return to their home city. This medical officer could not restrain altogether his pride when he remarked that his men were a "clean bunch," and he attributed the success in holding down the percentage of exposures and actual cases of venereal disease to the sense of loyalty to the regiment and a higher standard of morals and proper education in sex hygiene. H. E. K.



## THE NEED FOR CONTRACT SURGEONS

For those physicians who have not for any reason applied for commissions in the Medical Reserve Corps there has been provided a means of serving their country by entering into a contract with the government for limited periods of time. A large number of physicians are willing and anxious to render patriotic service, but are unable to join the corps for the period of the war.

This contract service has furnished the means of meeting an emergency which could be filled only by competent neurologists and psychiatrists, and the present need for these specialists has stimulated the operation of the plan to employ contract surgeons in the work of examining recruits at camps, barracks, etc. The plan is to employ specially qualified neurologists and psychiatrists for full or part time, and it is presumed the arrangement will be extended to include other strictly special services.

The contract doctor is given a contract for a definite class of work at a definite place. At the termination of that work his contract can be annulled if so desired, or he can be continued in service and given another assignment. He is practically still a civilian, has received no commission and has been obliged to pass no physical examination. He acquires no claim against the government for disability incurred in the line of duty. He is obliged to wear uniform and has a compensation of \$150 per month, with mileage for travel under order.

Physicians accepted for the Medical Reserve Corps can take contracts for service until they have received and accepted their commissions when the contract will be annulled.

## GERMAN SOLDIERS THOUGHT AMERICA WAS ON THEIR SIDE

In a letter from Dr. Borden Veeder, published in this issue, we have an interesting account of the passage of Washington University Base Hospital Unit (No. 21) and the arrival in France. Written in very charming style, it enables one to visualize the activities of the friends who have gone across to answer the call for medical aid. A significant passage in Dr. Veeder's letter confirms the general impression that the German government does not give the people or the men in the trenches honest information about our attitude in this conflict. Dr. Veeder says the German wounded prisoners were much astonished to see American doctors in the English army—the Germans had heard that America was in the war, but were led to believe we were allied with Germany.

## NEWS NOTES

DR. E. J. BUTZKE of Mountain Grove, secretary of the Wright County Medical Society, has disposed of his interests in Mountain Grove and moved to St. Louis where he will take up general practice. He is located at the corner of Vandeventer and Laclede Avenues.

DR. HARVEY G. MUDD, St. Louis, who has been appointed major of the First Regiment Missouri Home Guards in charge of the medical service, has appointed Dr. E. Lee Dorsett captain, and Drs. Fred Fahlen and Horace Happel first lieutenants.

A JOINT convention of the Mississippi Valley Medical Association and the Interstate Association of Anesthetists will be held at the Secor Hotel, Toledo, Ohio, Oct. 9, 10, 11, 1917. Members interested in this meeting may obtain further information by addressing the secretary, Dr. Henry Enos Tulley, Louisville, Ky.

THE Association of the Purple Cross is a national organization of undertakers formed for the purpose of raising funds to send expert embalmers to the war zone to properly prepare the bodies of American soldiers for shipment and burial in America. This service will be rendered without charge to the government or the families of the deceased.

DR. E. HAYDN TROWBRIDGE, former assistant physician at State Hospital No. 2, St. Joseph, and for several years assistant superintendent of the Minnesota School for Feeble-Minded and Colony for Epileptics at Faribault, Minn., has recently returned to Missouri. He is located in the Rialto Bldg., Kansas City, and will confine his practice to the diagnosis and treatment of feeble-minded and epileptics. On October 1, Dr. Trowbridge contemplates opening a training school for unusual children which will be located in the suburbs of Kansas City.

DURING July the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

The Diarsenol Company Limited: Neodiar-senol.

Hoffmann LaRoche Chemical Works: Thio-col-Roche. Syrup Thiocol-Roche. Thiocol-Roche Tablets.

Mallinckrodt Chemical Works: Acetylsalicylic Acid, M. C. W.

H. K. Mulford Company: Concentrated Solution Sodium Hypochlorite-Mulford.

THE Committee on Necrology desires to receive data concerning the death of members throughout the state as promptly as possible so that the report of the committee may be complete for the next annual meeting. County society secretaries who learn of the death of their members would confer a favor on the committee by forwarding a short statement to the chairman of the committee or to the member of the committee nearest their city. The Necrology Committee is composed of the following: chairman, B. R. McAllaster, Carthage; T. J. Downing, New London; Robert Sevier, Richmond; J. A. Postlewait, Tarkio; F. M. Vessells, Perryville.

THE National Board of Medical Examiners held its second examination in Washington, D. C., June 13 to 21. There were twenty-four qualified candidates, twelve of whom appeared for examination, the others having been ordered into active duty between the time of their application and the date of the examination. Of the twelve who took the examination, nine passed. The next examination will be held in Chicago October 10 to 18. The regular corps of the Army and Navy may be entered by successful candidates, without further professional examination, providing they meet the adaptability and physical requirements. There will also be an examination in New York City in the early part of December.

MOBILIZATION of medical specialists for army service is in progress which will we believe be the means of solving what seemed at one time to develop into a troublesome question. Many physicians are willing to serve the government, but refrain from enlisting in the Medical Reserve Corps because they feel that since their talents have been wholly devoted to a limited sphere in medicine, their usefulness would be seriously impaired if after enlisting they were assigned to duties of a general nature; and they knew that the War Department could not promise to utilize their skill solely in the specialty for which they had fitted themselves. It will be welcome news therefore to the entire medical profession to know that the War Department has engaged the assistance of the National Commission on Mental Hygiene to enroll many of the best trained neurologists and psychiatrists to organize neuropathic hospital units and serve the country either as members of the Medical Reserve Corps or as consultants.

In this work Dr. Pearce Bailey, chairman of the National Committee on Mental Hygiene, has been commissioned as a major in the Medical Officers Reserve Corps and placed in charge of the undertaking. Under his directions Dr. M. A. Bliss of St. Louis has been working

for some time and succeeded in interesting a large number of specialists in mental and nervous diseases, some of whom have joined the corps, while others have offered their services as consultants.

A further step was taken by the National Commission by appointing a state committee in each state to carry on this work. For Missouri, Dr. C. R. Woodson of St. Joseph has been appointed state chairman, and he has appointed the following members of the committee: G. Wilse Robinson, S. G. Burnett, Kansas City; D. S. Booth, W. W. Graves, M. A. Bliss, H. S. Atkins, St. Louis; W. L. Whittington, St. Joseph; J. F. Robinson, W. F. Bradley, Nevada; S. A. Johnson, Springfield; M. O. Biggs, Fulton; F. L. Long, Farmington; R. P. C. Wilson, Marshall; Porter E. Williams, Bunce-ton; George Williams, Odessa; J. A. Waterman, Breckenridge; M. P. Overholser, Harrisonville; F. L. Keith, Flat River; A. C. Pettijohn, Brookfield; W. N. Bayliss, Clarence; B. R. McAllaster, Carthage.

#### NEW MEMBERS

Bollinger, William H., Seymour.  
Chipp, Joseph K., New Hampton.  
Cobb, B. E., Lemons.  
Davis, P. C., Middlegrove.  
Francis, H. H., St. Joseph.  
Galbreath, Jesse W., Urich.  
Glen, J. E., St. Louis.  
Hoefer, Edward A., Marceline.  
Isenberg, Henry G., Westphalia.  
Miller, Frank P., Urich.  
Price, John T., Mount Moriah.  
Remley, George C., Kansas City.  
Rush, George H., Kansas City.  
Russell, D. R., Kansas City.

#### CHANGES OF ADDRESS

Allen, Clay, Blairstown, Mo., to 471 Park Ave., New York, N. Y.  
Bugg, A. F., Corridon to Belle, Mo.  
Burgess, J. W., Belle to 608 Southwest Blvd., Kansas City, Mo.  
Butzke, E. J., Mountain Grove to 1406 Silver-ton Place, St. Louis.  
Crossen, H. S., 308 Wall Bldg. to 5423 Bartmer Ave., St. Louis.  
Davis, T. M., Humboldt Bldg. to 2424 N. Grand Ave., St. Louis.  
DeVilliss, Frank, Tipton, Mo., to Clyde, Kan.  
Dewey, J. E., Woodruff Bldg. to 1211 N. Jefferson, Springfield, Mo.  
Eaton, J. L., Bismarck to Farmington, Mo.  
Frame, Homer G., Willard to Mountain Grove, Mo.



Glynn, Robert, Woodruff Bldg. to 993 Benton, Springfield, Mo.

Kleinschmidt, H. E., St. Louis to New York, % American Social Hygiene Association.

Lieuallen, Roy O., Princeton, Mo., to Phoenix, Ariz., State Hospital.

Rendleman, George F., St. Louis to Anna, Ill.

Shrout, C. B., Shawnee, Okla., to Bunceton, Mo.

Stone, M. C., Woodruff Bldg. to 1107 Birdell, Springfield, Mo.

#### DECEASED

None.

### CORRESPONDENCE

#### LETTER FROM DR. VEEDER (WASHINGTON UNIVERSITY BASE HOSPITAL)

NO. 12 GENERAL HOSPITAL, B. E. F.,  
ROUEN, FRANCE, July 16, 1917.

*To the Editor:*—I have not forgotten my promise to drop you a letter of the doings of Ease Hospital No. 21. We had an uneventful trip to England, sailing from New York on the 17th of May on the S. S. *St. Paul*. No. 10 B. H. (Pennsylvania Hospital of Philadelphia) was on the same boat, as well as twenty orthopedic surgeons under Goldthwaite of Boston, and so with the seventy-five officers, 130 nurses and 300 enlisted men it was quite a military party. We had daily drills, setting-up exercises, lectures, etc., and the strangeness of the uniform wore off so that by the time we reached Liverpool we could recognize one another and our self-consciousness had disappeared. We saw no "subs," but the tension was rather high the last two days, and a day off England the sight of a U. S. destroyer was keenly welcomed.

We were in England nearly two weeks waiting for a full moon to wane before our channel crossing, as we were sent by the Southampton-Havre route. The men and some of the officers were in Blackpool, north of Liverpool, on the Irish Sea, the training camp for R. A. M. C. men, and so we were in a medical atmosphere. One day we were inspected by Sir Alfred Keough, who gave us a most cordial welcome. After a few days I went down to London and joined the other officers who with the nurses had been sent directly to London from Liverpool. We were extensively entertained in London, but unfortunately none of us were in the mood for it; much to every one's amusement, we were anxious to go across. Nu-

merous teas, outings, theater parties were given us, and we saw a lot of the medical work, each man more or less to his own specialty. One of the most interesting was the training of blind soldiers at St. Dunstons, and personally I enjoyed a day at the Gt. Armond St. Hospital for Children with Still.

It is very hard to express the attitude of England toward America since we have entered the war. We all feel we are very much needed, but there is something much deeper than that. Perhaps an incident in London will express what I mean. We were sent tickets for the "Empire Day" services at St. Paul's Cathedral, at which, annually, the sixty-four flags of the empire are blessed (each flag representing a British possession). Imagine our surprise when at the head of the sixty-four flags and side by side with the Union Jack the Star and Stripes led the procession down the aisle to the altar. We "Yank" were more than welcomed in Blackpool and London, and here we are simply accepted as "one of us"—the best compliment that could be paid. It is being more and more driven home to us that the language tie is a pretty strong bond.

At last the powers that be decided that the moon was sufficiently old, and we left London town with its theaters and life and lightless nights and met our men at Southampton. Here the officers and "sisters" (a term decidedly disliked by them) were put on a hospital ship and the men on a transport and together with many other boats, and with a convoy of destroyers we "beat it for Havre" under the cover of night. I am sure none of us will ever give a thought to ice, fog or other ships when crossing the ocean again—we became so accustomed on the *St. Paul* to plunging ahead at full speed into a black night without a light showing or a horn sounding—and with ships all about us doing the same.

It was a calm night and we made a record trip across. Two boats were "subbed" that night while crossing, but both "limped home." You may not know that hospital ships are painted gray these days and carry no insignia as a result of the Boche's taste for the Red Cross. We spent two days in Havre—remembered chiefly for our lost luggage and waiting for our train to leave for Rouen. We were told it would leave at 3 p. m., and we finally pulled out at 2 a. m. for a sleepless night's ride to Rouen.

We were assigned by the British government to take over No. 12 General Hospital, B. E. F., at Rouen. It is a fine old Normandy city and we

might do much worse for our (?) year's service. The only objection is the rain. It rains 250 out of the 365 days in Normandy—not a steady downpour, but from three to six showers a day. The other day I ran across the following expression in one of de Maupassant's stories: “. . . une pluie des environs de Rouen, ce pot de chambre de la France.” It hits it off. The Cleveland (Lakeside) Unit is at No. 9 Hospital about a mile from us and so we have about 500 “Yank” or “Sammies” as they call the enlisted men. It's only a drop in the bucket, as Rouen is a big base with thousands of soldiers, but enough for baseball games and a Fourth of July party. It is a cosmopolitan crowd: English, Canadians, Australians, Indians, Kaffirs, Egyptians, French, etc., all together on the same side. There are a number of hospitals—ours is one of three on the race track and has been here since the beginning of the war, except for a hasty retreat at the time the Uhlan patrols were as far south as Rouen before the battle of the Marne. We are fortunate enough to have the grandstands at our end, and we use the under part for offices and messes, and some of us prefer to sleep above rather than in our tents. The patients are in tents, except for the most seriously ill, for whom two huts are provided. The tents are marquee style and hold about twelve to fourteen patients and are very satisfactory (except for the nurses). The “sisters” have huts to live in.

Our medical work in many respects corresponds to what in the scheme of organization of the U. S. medical service would be an evacuation hospital on the L. of C.—except for size. We have twice the capacity of the St. Louis City Hospital. We receive and send out large convoys of sick and wounded—keeping patients only so long as is absolutely necessary. There is a continual and constant changing of patients (usually at night, by the way). Much of the work is minor and usual, but some types of disease are new and distinctly military. Allison has been rigging up some frames we brought from St. Louis and some Sinclair frames which have been attracting considerable attention and many visitors. We are also the “shell-shock” hospital, and Schwab has had good opportunity to study these cases, which are among the most interesting and perplexing. We get a great many cases of “trench fever,” which as you know is in all probability a spirochete infection. It has an intermittent febrile course, and the patients suffer a great deal of “bone pain.” We also have a great many sent in with the diag-

nosis of P. U. O. (pyrexia of unknown origin), which, however, is not, as a Tommy wrote home, “a new disease of the war.”

One morning Fischel and I saw a number of cases of Bilharzia infection among some Egyptians. That same morning we attended the “sick call” at a Boche compound. We noticed we caused considerable excitement and learned from the C. O. the next day it was because it was the first the Boche knew America was on the Allied side—they had heard we were in, but had been led to believe we were with the Germans.

We have had innumerable interesting and unusual experiences. At present we are going in squads to the “gas school,” where we are taught how to wear our respirators and go through chambers and trenches filled with gas that will kill after two or three minutes' exposure. Just now gas is a big factor at the front—gas shells being used that kill 10 miles behind the line.

Of course, one sees but a very little part of the “show” when situated as we are, and it is hard to grasp the whole status, but it is not the feeling here that the war will be over very soon, and we will be happily disappointed if thousands of Americans do not have to come over. Ships, food and money will by no means do for our part. I doubt if the American medical man fully realizes the demands that will be made of him. Every one will have to get ready to do his bit.

We are all well and happy and the adjustment and taking over the British hospital has been remarkably smooth. What shall become of us—that is, whether we are to be kept here, broken up and sent to the front, or transferred to the American troops—no one has the slightest idea. One thing you rapidly learn is that one has no choice in anything. You do as you are told and you are never told why or consulted in any way. Sincerely,

BORDEN VEEDER.

July 16, 1917.

---

## MISCELLANY

---

### MAY CALL EYE, EAR AND THROAT SURGEONS INTO ARMY SERVICE

Under the direction of the general medical board of the Council of National Defense, the subcommittees on otolaryngology and ophthalmology have sent out to practically every eye, ear and throat surgeon in the country a questionnaire to learn the willingness of these surgeons to enter military medical service if a call were made for them. Both committees report



that they will have a sufficient number of men to supply the needs of the Surgeon General.

With the idea in view that injuries to the head seldom involve one structure, the subcommittee on ophthalmology determined some weeks ago to join action with the subcommittee on otolaryngology for the purpose of devising the best means of bringing all head subjects under one section. To bring about this result, the executive committee added to the personnel of the subcommittee on otolaryngology an oral surgeon, and to the subcommittee on ophthalmology a brain surgeon.

These committees, acting as a joint body, have made an exhaustive study, and as a result recommended to the Surgeon General, through Major Lyster, the advisability of the establishment of sections on surgery of the head in the base hospitals. Major T. C. Lyster was assigned to make a thorough study of the whole situation.

#### **SPECIALISTS WILL WEED OUT MEN NERVOUSLY OR MENTALLY UNFIT FOR SERVICE IN ARMY**

Machinery has been organized by the Surgeon General's office to weed out men nervously or mentally unfit for service in the army.

A group of 150 specialists will conduct a series of severe examination. Specific directions for detecting symptoms have been drawn up by Maj. Bailey, of the Medical Reserve Corps, in conference with some of the most distinguished psychiatrists and neurologists of the country. Maj. Bailey, who in private life is Dr. Pearce Bailey, is one of the leaders in this field.

Men will be excluded from military service for organic nervous disease, such as locomotor ataxia; for mental defects sufficient to class them as defectives; for insanity or a definite family record of it, and for chronic addiction to drugs or alcohol.

Every soldier will be subject to close scrutiny by one of the 150 specialists. These men have been taken into the Medical Officers Reserve Corps for this work. They will be detailed to cantonments and later will be transferred to hospitals abroad to supervise the care of the many "nervous casualties" which result from modern war.

These Reserve Corps specialists have been trained in neurology and psychiatry by work in institutions in large cities, as superintendents of State hospitals, and as examiners at immigration stations, police laboratories, and public schools.

The printed instructions which they will use in detecting nervous and mental troubles are the result of the experience of such leaders in this field as Major Bailey; Major Edgar King, of the Regular Army, who has been psychiatrist at the disciplinary barracks at Fort Leavenworth; Professor Adolph Meyer, director of the Phipps Clinic at Johns Hopkins; Thomas W. Salmon, director of the National Committee on Mental Hygiene; Dr. Walter E. Fernald, superintendent of the Massachusetts School for the Feeble Minded; Dr. George M. Kine, chairman of the Massachusetts Commission on Mental Diseases; Dr. Joseph Collins, of the New York Neurological Institute; Dr. Owen Copp, superintendent of the Pennsylvania State Hospital; Dr. W. L. Russell, Bloomingdale, White Plains, New York; Dr. W. A. White, superintendent of St. Elizabeth's Hospital, Washington.

#### **THIRTY-TWO HOSPITALS AT ARMY AND NATIONAL GUARD CAMPS WILL COST \$14,500,000**

Provisions for caring for the health of the soldiers now being made by the Medical Department of the Army include the construction of 32 hospitals at National Army and National Guard camps, the enlargement of some 30 hospitals used in connection with officers' training camps, taking over or construction of at least two general hospitals at ports, increasing the size of two other general hospitals behind these, and the building or taking over of a number of general hospitals to be used for special treatment work. Plans for this phase of the work are not complete. Efforts are being made to secure hospital buildings ready built, but some will probably have to be constructed.

A further step to be worked out is the provision of reconstruction hospitals, where artificial limbs will be made, repair surgery done, artificial limbs fitted to patients, and reeducation of cripples begun, to enable them to use the artificial limbs provided and again become useful members of society.

The aim of the Medical Department is to have hospital provisions for 5 per cent of the enlisted force by fall, and then to proceed to extend that to 10 per cent. Abroad facilities for 20 per cent. of the American expeditionary forces will be provided.

At cantonments hospital provision will be made for 3 per cent. of the troops at each camp. A complete modern hospital will be constructed at each, containing at least 1,000 beds. With the space reserved for extensions, each hospital and its auxiliary buildings will require 60 acres. This allotment will leave generous space between the various buildings of each hospital. Hospitals at National Army camps will cost approximately \$500,000 each, and at National Guard camps, where heating is not required, construction is lighter and sewer-connected plumbing not to be used, about \$400,000. This will bring the total cost of the 32 hospitals to about \$14,500,000. Each hospital will have equipment equal to that of the best institutions in the country, although the construction of the buildings will be of much cheaper quality.

One type is being used in all the hospital construction work done by the Army. All the buildings are 24 feet wide, the length varying to meet the needs. The wards are usually 157 feet long, which is the size needed for 32 beds. There will be a diet kitchen for each ward, a porch on one side and end of each ward, and a corridor connecting with the buildings on either side which will be covered in the case of the northern cantonments.

About 70 buildings will be comprised in each cantonment hospital on the 1,000-bed basis. In some cases two wards are joined, thus reducing the actual number of separate buildings, but the number of buildings will reach about 70, counting each ward as a building.

Each hospital will have a well-equipped laboratory where bacteriological and pathological work can be done which any well-equipped hospital could handle. Some special blood tests will be made at the department hospitals, which will take care of any work that the divisional hospitals at the camps cannot attend to.

There will also be an infirmary for each regiment which will fulfill the functions usually performed by such institutions. There men not needing to be confined in hospital will report when any condition appears which demands watching. There vaccination will be done and the typhoid and paratyphoid preventive treatments administered.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH  
HAVE PAID THE STATE ASSESSMENT FOR  
ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.  
Webster County Medical Society, Dec. 6, 1916.  
Platte County Medical Society, Dec. 8, 1916.  
Cape Girardeau County Medical Society, Dec. 15, 1916.  
Livingston County Medical Society, Dec. 16, 1916.  
Madison County Medical Society, Dec. 17, 1916.  
Carter-Shannon County Medical Society, Dec. 20, 1916.  
Atchison County Medical Society, Dec. 26, 1916.  
Linn County Medical Society, Dec. 30, 1916.  
Clark County Medical Society, Dec. 30, 1916.  
Benton County Medical Society, Dec. 30, 1916.  
Chariton County Medical Society, Jan. 1, 1917.  
Schuyler County Medical Society, Jan. 5, 1917.  
Crawford County Medical Society, Jan. 9, 1917.  
Adair County Medical Society, Jan. 10, 1917.  
Dent County Medical Society, Jan. 10, 1917.  
Mississippi County Medical Society, Jan. 16, 1917.  
Camden County Medical Society, Jan. 23, 1917.  
Barton County Medical Society, Jan. 30, 1917.  
Scott County Medical Society, Feb. 13, 1917.  
Cooper County Medical Society, Feb. 21, 1917.  
Gentry County Medical Society, Feb. 28, 1917.  
Marion County Medical Society, March 1, 1917.  
Ralls County Medical Society, March 13, 1917.  
Perry County Medical Society, March 20, 1917.  
Ste. Genevieve County Medical Society, March 27, 1917.  
Reynolds County Medical Society, March 30, 1917.  
Polk County Medical Society, April 7, 1917.  
Pike County Medical Society, April 11, 1917.  
Howell County Medical Society, April 17, 1917.  
Cass County Medical Society, April 18, 1917.  
Sullivan County Medical Society, April 20, 1917.  
Ray County Medical Society, April 25, 1917.  
Taney County Medical Society, May 1, 1917.  
Vernon County Medical Society, May 10, 1917.  
Dade County Medical Society, May 12, 1917.  
Holt County Medical Society, May 14, 1917.  
Carroll County Medical Society, May 23, 1917.  
Pemiscot County Medical Society, June 6, 1917.  
Laclede County Medical Society, June 13, 1917.  
Johnson County Medical Society, June 27, 1917.  
Putnam County Medical Society, Aug. 5, 1917.  
Audrain County Medical Society, Aug. 9, 1917.

### CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met in Liberty, on June 25, in the parlors of the Major Hotel. Twelve members were present, which was considered good this hot weather, when good men sleep.

Dr. J. T. Rice of Excelsior Springs read the principal paper of the evening, on the subject, "The Physician Himself." This was a very timely effort; too often we forget "to see ourselves as others see us," and always to our detriment.

Dr. Rice's paper took up practically everything to constitute the doctor's mirror; his figure and personality; his dress, bearing, sick-room manners, religion, language, affiliations—in fact all that go to make the ideal physician. The paper was characteristic of Dr. Rice, original to a fault, and full of thought for the thinking man. In the discussion much was brought out that showed the true inwardness of the men called on. I may mention Drs. E. H. Miller, J. H. Rothwell, F. H. Matthews, R. E. Sevier, Y. D. Craven

and J. J. Gaines. And we all felt benefited by this meeting and went from it with new courage and many new views of our calling.

Dr. J. J. Gaines read a short paper on "Why Is Phylacogen?" which brought out the terse discussion "Me too."

Adjourned to meet in Excelsior Springs the last Monday evening in July.

### Meeting of July 30

The Clay County Medical Society met at the Snapp Hotel in Excelsior Springs, Monday evening, July 30. Fourteen members were present, with the following visitors: Drs. Chas. Wood Fassett, Editor of the *Medical Herald*, St. Joseph; B. E. Fahrney of La Salle, Ill.; Rev. F. J. Maple of Excelsior Springs, and Dr. C. C. Conover of Kansas City.

Dan Cupid has been busy within our ranks and has taken bodily possession of Dr. Roy T. Milligan of Kearney. The doctor has won the prize in the person of one of Illinois' fairest daughters and Dr. and Mrs. Milligan are now "at home" in Kearney.

The scientific program of our July meeting was full of interest. Dr. C. C. Conover gave a stereopticon lecture on "Intestinal Intoxication." Notwithstanding the importance of the subject, several of our members forgot the meeting. Dr. Conover attacked the too common practice of operating for everything intestinal. He condemned some prominent authorities for publishing successes and keeping failures under cover. He did not deny the necessity of operating for actual bands of adhesion, but he said that many short-circuits have been made without the true knowledge of the pathology of the condition; hence the great number of semi-invalids that consult us after operation. He illustrated the similarity of fibrosis in the intestine to the well-known fibrosis in the heart muscle. To have missed this lecture through sheer neglect and absent-mindedness is well nigh inexcusable.

The discussion by Drs. Rothwell, Fahrney, Fassett, Miller and Suddarth brought many interesting and instructive points. A rising vote of thanks was tendered Dr. Conover and a motion was made and carried that he be invited to give the therapeutics of intestinal intoxication at the October meeting.

Dr. R. E. Sevier of Liberty spoke on "Valvular Lesions of the Heart." Dr. Sevier's discussion of his subject was "right off the bat," beginning with the anatomy and physiology of the heart and leading into methods of arriving at conclusions in heart disease. He pointed out errors in diagnosis and the methods of avoiding them. Each man present felt more capable after hearing Dr. Sevier. One of the most interesting discussions of the year followed this lecture, holding the meeting till well toward midnight.

The Clay County Medical Society is sixty-three years old, and yet she is full of the fire and brains of young adult life. Her meetings are worth while.

J. J. GAINES, M.D., Secretary.

### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in regular session at Appleton City on Wednesday, June 13, 1917. By request the open session was called to order by Dr. C. W. Head, at 1:30 p. m. The minutes of the previous meeting were read and approved. Those present were: Drs. W. Cline, R. J. Smith, W. E. Bell, A. C. Ward, Ruth Severs, G. D. Dalgleish of Osceola; E. C. Peelor, Lowry City; J. H. Tinsley, Iconium; L. L. Smith, Ulrich; W. Foster and T. F. Lockwood, Butler; Thomas Gray and C. E. Powers, Rockville; J. B. Gathright, Pope; Will P. Bradley and W. R. Summers, Nevada; C. W. Head and R. J. Jennings, Windsor; N. I. Stebbins, J. R. Hampton, J. R. Wallis, R. D. Haire, A. J. McNees and F. M.



Douglass, Clinton, and a good audience of town people.

Dr. T. F. Lockwood delivered his address on "Home, Health and Happiness," which was interesting and instructive to all; from the close attention paid it was appreciated by all.

The scientific session was called to order by President McNeess.

Dr. Stebbins gave a talk on Fractures—The Mode of Treatment, Manner of Dressing, and Results Obtained. He had present two cases to illustrate his talk and manner of treatment and why. Discussion by Drs. Lockwood, Cline, Haire, Bell and L. L. Smith. Trains leaving at this time prevented Dr. Stebbins from closing the discussion.

Dr. Cline reported a case of rheumatic fever with heart complication. This was discussed by Drs. Dalgleisch, Ward and Haire; Dr. Cline closing.

Many doctors having left on the train, the question of Medical Reserve was postponed to next meeting.

Dr. Leslie L. Smith of Urich renewed membership in Henry County Medical Society.

The St. Clair County physicians were called to the front and their medical society was reorganized.

Society adjourned.

#### Meeting of July 11

The Henry County Medical Society met in Windsor, Mo., Wednesday, July 11, and by request Dr. C. W. Head called the meeting to order at 2 p. m.

The minutes of the previous meeting were read and approved. There were present Drs. T. A. Blackmore, Will P. Bradley, M. E. Bradley, C. W. Head, R. J. Jennings, N. I. Stebbins, R. L. Shadburn, J. H. Walton, H. M. Wall, S. W. Woltzen, F. M. Douglass, J. R. Hampton and J. G. Beaty. Dr. Breame, dentist, and Dr. Hugh Miller of Kansas City were invited guests.

Dr. Miller gave a lecture on the subject "Interruption of Facial Development," which was well handled and many new points were brought out. He showed plaster casts of many mouths to illustrate his talk, and some drawings of arch of mouth and alveolar processes that made the talk more easily understood and interesting. This was a very instructive lecture and was listened to with marked attention by all present.

The discussion was entered into with spirit by Drs. Walton, Blackmore, W. P. Bradley, M. E. Bradley, Stebbins, Shadburn and Breame.

Dr. Hampton having taken the chair, Dr. Head moved a vote of thanks to Dr. Miller, which carried unanimously. In closing Dr. Miller expressed his pleasure in getting the invitation to be present, there being many patients present with Mrs. Walton during the lecture that were well pleased with the talk.

Dr. Walton introduced a lady with an eye trouble following pneumonia, which he requested Dr. Miller to examine, and on examination it was concluded the trouble was due to an ulceration of the cornea and meibomian glands due to infection, and recommended treatment.

A second case was presented, that of metastatic arthritis following rheumatic fever with painful swelling of right knee, which became about fixed in a flexed position. The treatment was described and the girl walked across the room several times to show the result.

Third case, a man 81 years old. Amputated right great toe for cancer with healing by first intention.

Fourth case, a man 61 years old, dynamic aorta; patient called palpitation.

These cases were all examined by the doctors and well discussed. Dr. Walton, in introducing his cases, gave a complete history of each one, the numerous tests he used, blood counts made, respiration and temperature at different times, why he did this work and what he learned by it.

Dr. Blackmore then gave a talk on fractures of the femur. The different manners of treatment were

given, his reasons for using extension and sand bags for a temporary dressing, how long continued, then using plaster for final dressing. He had several boys present to be examined and measured that he had treated, to show results.

The secretary read communications received about the medical reserve corps, what was expected of the doctors, and the age of those requested to join. Several spoke of receiving the blanks but have not filled them out as yet.

The next tri-county medical meet that this society must furnish program and place for was called and by a vote was set for Wednesday, October 10, at Clinton, the secretary to procure lecturers. It was decided to hold the next regular meeting of the society in Clinton on Wednesday, August 15.

F. M. DOUGLASS, M.D., Secretary.

#### PETTIS COUNTY MEDICAL SOCIETY

##### Meeting of July 19

The Pettis County Medical Society met on the above date in special session at the courthouse with Dr. M. P. Sly presiding.

The minutes of the meeting of June 18 were read and adopted.

Motion was made and carried that the secretary be instructed to mail postal cards to the members of the society to vote on article three of the resolutions adopted by the state association at Springfield on May 19, pertaining to the division of fees collected from the clientele of physicians enlisted in the army and navy during the absence of such physicians, this provision to apply to members of the society only.

On invitation from the chair, Dr. R. E. Schluter of St. Louis, President of the State Association, addressed the society on the subject of necessity for a thorough and permanent organization of the profession in county, state and national associations in order that the best results may be obtained for both the profession and the public, and met with the hearty approval of the members.

Dr. E. J. Goodwin, State Secretary, then addressed the society along the line of loyalty of the members to the state organization and making a plea for a closer relation of the officers and members of the county societies with the State Medical Journal. Dr. Goodwin supplemented his talk by reading an essay on "Loyalty." This article gave evidence of deep study and forceful argument and was so well received that several members of the society requested Dr. Goodwin to allow it to appear in the JOURNAL at an early date.

Dr. W. J. Wills, a former member of the society, now a resident of Springfield, was also present and was given a cordial welcome. He made a short talk expressing his pleasure at being present and stated that he was on his way to take up his duties as first lieutenant in the army at Fort Riley. He expects to be sent at an early date to France with our expeditionary forces. We expect to have good reports from Dr. Wills early and often. The best wishes of this society go with him.

The society then adjourned to Robinson's Café where refreshments were served and greatly enjoyed.

As both hands of the clock were pointing to the zenith the company reluctantly dispersed, extending Dr. Schluter and Dr. Goodwin a vote of thanks and inviting them to call again soon and often.

W. W. WHEELER, M.D., Secretary.

#### POLK COUNTY MEDICAL SOCIETY

The Polk County Medical Society met at the Viles Hotel, Bolivar, at 11 a. m., Tuesday, June 19, and was called to order by the president, Dr. Stuffleham. The following members and physicians were in attendance: Drs. A. J. Stuffleham, W. Glenn Miller, John W. Coy, L. L. Hunt, C. H. Brown, C. N. Hahn, R. C. Nevins,

H. W. Squibb, W. D. Drake, A. P. Mitchell, J. F. Roberts, J. E. Loafman and C. V. Stewart; also Drs. T. O. Klingner, Joseph W. Love, A. L. Anderson, W. J. Will and E. C. Roseberry, of Springfield. The application for membership of Dr. C. V. Stewart and Wm. J. Kinder were read and referred to the Board of Censors.

Dr. T. O. Klingner read an interesting paper on the different kinds of ulcers of the cornea, the causes and treatment of the same, which was discussed by the members.

Dr. W. D. Drake read an interesting paper on myocarditis. Dr. Drake also presented an interesting clinical case of tabes dorsalis due to specific infection of over twenty years' standing. The case was attended with the main symptoms of this disease and was discussed by members present.

Dr. W. J. Wills read an interesting paper on prostatectomy, its causes and treatment, which was discussed by the society.

Dr. H. W. Squibb reported a very interesting case of osteomyelitis in a boy eighteen years old which he was enabled to diagnose by exclusion. The case was treated successfully finally, though of long standing. A Roentgen-ray photograph of some was shown.

Dr. Love gave an interesting discourse on the subject of "Medical Mobilization and the War," explaining the objects, benefits and qualifications to medical men who enter the service of the army.

Dr. Love introduced the following resolution which was adopted by the society:

*"Resolved,* That the secretary of the Polk County Medical Society is instructed to acknowledge the receipt of the Preparedness Committee's action and that the society pledges its efforts to further the work of mobilizing the medical profession of the county for the needs of the army during the war."

After the transaction of some miscellaneous business the society adjourned to meet at Bolivar on the second Tuesday in June.

J. F. ROBERTS, M.D., Secretary.

#### SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society met in Oran, July 8, 1917, and was called to order by the president, Dr. W. O. Finney. The secretary being absent, Dr. Hutton was chosen as acting secretary. The minutes of the last meeting were read and approved.

Dr. Wescoat gave an extemporaneous discourse on enterocolitis which was discussed generally by those present.

A motion was made and carried that the matter of writing eligible members of the profession to become members of the county society be approved.

The following resolution was on motion adopted:

*Resolved,* By the Scott County Medical Society that the resolution offered by the State Medical Association in regard to caring for the practice of members gone to war is impractical, and that we offer as a resolution in line thereof that the government pay a salary sufficient to sustain the families of those who have gone to war, and that a copy of the resolution be sent to the secretary of the State Medical Association.

The society adjourned to meet in Oran at the next regular meeting.

W. S. HUTTON, M.D., Acting Secretary.

#### ST. CLAIR COUNTY MEDICAL SOCIETY

The St. Clair County Medical Society met at Appleton City on June 13, 1917, and reorganized by electing Dr. Charles A. Smith of Osceola, president; Dr. Edwin C. Peelor of Lowry City, vice president, and Dr. Ruth Seevers of Osceola, secretary-treasurer.

It was decided to hold a meeting in Osceola on

Wednesday, June 20, to perfect the organization. Those present and participating and others that requested membership, were: Drs. C. A. Smith, A. C. Ward, W. E. Bell, G. D. Dalglesch, Ruth Severs, E. E. Sullivan, Osceola; C. S. Stratton, J. P. Green, Roscoe; J. H. Tinsley, Iconium; D. S. Talbott, G. C. Bates, Appleton City; E. C. Peelor, Leo S. Wright, W. H. Dice, Lowry City; C. L. Landaker, Collins.

F. M. DOUGLASS, M.D., Reporter.

#### Meeting of July 18

The St. Clair County Medical Society met in the Court House at Osceola, July 18, with twelve members present and five visitors. The society was honored by the presence of State Association President, Dr. Robert E. Schlueter, St. Louis; District Councilor, Dr. W. J. Ferguson of Sedalia; Secretary Henry County Medical Society, Dr. F. M. Douglass, of Clinton; Dr. N. I. Stebbins, of Clinton, and Dr. J. Y. Wilson, of Osceola.

Before convening at the Court House the members met at the office of Dr. Seevers and examined a patient whom Dr. Landaker presented; a case of goitre of long standing, valvular heart lesion, and toxemia which dates back some months to an attack of pneumonia. The discussion which resulted was open to all and brought out many interesting points in the toxemias due to goitre, and many suggestions as to the management of heart lesions.

Dr. Schlueter addressed the Society on the subject of Medical Organization, spoke about malpractice suits and how to prevent them, and in closing presented the medical side of the present war situation in a manner which impressed all with the idea of the high calling of the medical profession. He urged that the doctors volunteer rather than hang back and make the medical draft a necessity.

Dr. Ferguson upheld Dr. Schlueter's remarks and urged the value to the physician as an individual of being an active member of his County Society.

After a general discussion among the members, the Society adjourned to meet at the bedside of a patient of Dr. Sullivan which consultation resulted in the advice of an early operation in a case of fibroid tumor.

RUTH SEEVERS, M.D., Secretary.

#### WRIGHT COUNTY MEDICAL SOCIETY

The Wright County Medical Society held their regular quarterly meeting at Norwood on Aug. 2, 1917.

The meeting was called to order by the president, Dr. R. A. Ryan, in Ellis Hall, at 2:00 p. m.

The roll of members was called when the following answered present: Drs. Ames, Daugherty, Hubbard and Wittwer, of Mountain Grove; Drs. Ryan and Vannoy, of Norwood; Drs. Fusion and Robers, of Mansfield. Visitors: Drs. Frame and Palmer, of Mountain Grove.

Dr. Ryan presented the Society with a very interesting clinic which was thoroughly discussed and the various phases of the case brought out and the doctor asked to report the progress of the case at our next meeting.

Dr. Daugherty rendered the Society a very interesting paper on "Enterocolitis." This paper was discussed by all present. Different ideas as to the management of these cases were forcibly brought out in the discussion and all seemed benefited thereby.

The resolution concerning care of practice of members called to the colors, as passed by the State Association at its meeting in Springfield, was taken up and passed by our County Society.

No further business appearing, the Society adjourned to meet in Mountain Grove the first Thursday in November.

J. A. FUSON, M.D., Secretary.



## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**HAY-FEVER POLLENIN SPRING-MULFORD.**—A liquid obtained by extracting the protein of the pollen of rye, timothy, orchard grass, sweet vernal grass, and red top grass and standardizing the solution to a definite protein content. This pollen extract is said to be useful for the prevention and treatment of spring "hay-fever." It is supplied in a four syringe package containing increasing doses of pollen protein and in a one syringe package containing the maximum dose. The H. K. Mulford Co., Philadelphia.

**HAY-FEVER POLLENIN FALL-MULFORD.**—A liquid obtained by extracting the protein of the pollen of ragweed, golden rod and maize and standardizing the extract to a definite protein content. This pollen extract is said to be of value in the prevention and treatment of fall "hay-fever." It is supplied in four syringe packages containing increasing doses of pollen protein and in a one syringe package containing the maximum dose. The H. K. Mulford Co., Philadelphia.

**BORCHERDT'S MALT OLIVE.**—A liquid stated to be composed of olive oil 20 per cent., glycerin 10 per cent. and Borchardt's malt extract 70 per cent. The Borchardt Malt Extract Co., Chicago.

**CITRESIA.**—Magnesium acid citrate, the hydrated acid magnesium salt of citric acid. A colorless salt, very soluble in water and having a pleasant acid taste. It may be administered in place of solution of magnesium citrate by dissolving 25 gm. in 25 c.c. syrup of citric acid and 125 c.c. water. Horace North, New York.

**PASTEUR ANTIRABIC PREVENTIVE TREATMENT** (Harris Modification).—An antirabic vaccine prepared from brains and spinal cords of rabbits, dead of fixed virus rabies infection, and standardized by the method of Harris. One dose is given for a period of fourteen days. Each dose is sent out separately. Eli Lilly & Co., Indianapolis, Ind. (*Jour. A. M. A.*, July 7, 1917, p. 39).

**ACETYSALICYLIC ACID, M. C. W.**—A brand of acetylsalicylic acid complying with the standards of New and Nonofficial Remedies. Mallinckrodt Chemical Works, St. Louis (*Jour. A. M. A.*, July 21, 1917, p. 199).

### PROPAGANDA FOR REFORM

**CREOSOTE-DELSON AND CREOFOS.**—Creosote-Delson is said to be "beechwood creosote from which the irritating and caustic properties are removed by fractional distillation." It is marketed chiefly as Creofos. Creofos is said to be Creosote-Delson in an emulsion containing hypophosphites. The Council on Pharmacy and Chemistry declared Creosote-Delson inadmissible to New and Nonofficial Remedies because its identity and its difference from, and asserted superiority over the official creosote had not been established. It declared Creofos ineligible because its composition had not been satisfactorily declared, because the therapeutic claims were grossly exaggerated, because the name was nondescriptive of the composition and because the inclusion of hypophosphites was irrational (*Jour. A. M. A.*, July 7, 1917, p. 58).

**SOME MISBRANDED NOSTRUMS.**—The following "patent" medicines have been found misbranded under the federal Food and Drugs Act, chiefly because the therapeutical claims made for them were misleading and false: Quaker Herb Extract, a water-alcohol extract of an emodin-bearing drug.—Payne's New Discovery, a water-alcohol solution containing small amounts of baking soda, licorice and extractive matter from a laxative plant drug.—Payne's Quick Relief, chiefly turpentine with cayenne pepper, resin, camphor and chloroform.—Quaker Oil of Balm, containing turpentine, cayenne pepper, chloroform, etc.—Cooper's New Discovery, a nostrum of the alcohol tonic type, containing 20 per cent. alcohol, some emodin, aloes and a small quantity of oil of sassafras, together with reducing sugars.—Cooper's Quick Relief, a liniment consisting of cayenne pepper in alcohol (31 per cent.) flavored with oil of sassafras.—Wilson's Preparation, a powder containing largely starch, acacia and sugar with potassium acetate, calcium hypophosphite and quinin (*Jour. A. M. A.*, July 7, 1917, p. 58-59).

**VENARSEN.**—William A. Wilson, Kansas City, Mo., writes that he has advised the Intravenous Products Company that after using a great quantity of Venarsen, he can see no more effect on the cases treated than if so much water had been administered, and that this is also the report of Don R. Black, pathologist for Bell Memorial Hospital, University of Kansas (*Jour. A. M. A.*, July 7, 1917, p. 62).

**TRINER'S AMERICAN ELIXIR OF BITTER WINE.**—The Council on Pharmacy and Chemistry reports that this is a wine to which bitter drugs and laxatives have been added. Though evidently intended for public consumption, it is also advertised to physicians. The composition of this "wine"—some bitter drugs, a laxative and a tannin-containing, constipating red wine—and the advertising propaganda all tend to the continued use of this alcoholic stimulant and thus to the unconscious formation of a desire for alcoholic stimulation. As the medical journal advertisements may lead physicians to prescribe this secret and irrational preparation and thus unconsciously lead to alcoholism, the Council authorized publication of its report (*Jour. A. M. A.*, July 14, 1917, p. 139).

**SOME MISBRANDED NOSTRUMS.**—The following "patent" medicines have been found misbranded under the federal Food and Drugs Act. The curative claims made for them were misleading, unwarranted and false: Poland Wine Bitters, a wine to which emodin-bearing and other drugs had been added.—Koenig's Nerve Tonic, claimed to be a natural remedy for epileptic fits, etc.—Mrs. Edward's Infant Syrup, a "baby killer" containing morphin and alcohol.—Root Juice Compound, which was not a root juice (*Jour. A. M. A.*, July 14, 1917, p. 139).

**THE CRUCIAL TEST OF THERAPEUTIC EVIDENCE.**—Torald Sollmann points out that if a patient improves after taking a remedy we do not know that he improved on account of the remedy or as a result of the natural course of the disease or for other reasons. In order that adequate allowance may be made for the natural course of the disease, clinical trials of a medicament should be carried out in one of two ways. The first is the statistical method in which alternate patients receive or do not receive the treatment. This method is usually of value only when a large number

of cases are available, and even then it is limited or doubtful because it cannot take sufficient account of the individuality of cases. The second method consists in the attempt to distinguish unknown preparations by their effects. In this a patient, or a series of patients, is given the preparation which is to be tested, and another preparation which is inactive, or a preparation the effects of which are to be compared with the first. In either case the investigator does not know when he is giving one or the other, and tries to distinguish them by their effects. If one drug is really of value and superior to the other, this "blind" test will surely bring out such efficiency or superiority (*Jour. A. M. A.*, July 21, 1917, p. 198).

**TUMORS IN ANILIN WORKERS.**—Long exposure appears to result sometimes in the development of tumors of the bladder, with or without the symptoms of chronic anilinism. In Germany many such cases have been observed in past years. At the first sign of trouble with urine or bladder in anilin workers, the advisability of careful cystoscopy should be considered (*Jour. A. M. A.*, July 21, 1917, p. 204).

**LOW'S WORM SYRUP.**—The A. M. A. Chemical Laboratory reports that Low's Worm Syrup, sold by Smith, Kline and French Company, Philadelphia, contains 0.93 Gm. santonin per 100 C.c., or 4.2 grains per fluidounce, and a laxative drug, probably senna. Each drachm (teaspoonful) therefore contains a little more than one-half grain. The preparation, like so many of the worm syrups on the market, is of the usual dangerous santonin-containing type, although no hint is given of the presence of this drug nor any warning that it contains a poison (*Jour. A. M. A.*, July 21, 1917, p. 225).

**REDINTOL.**—This is a paraffin mixture for the treatment of burns. It is marketed by Johnson and Johnson, New Brunswick, N. J., with the following statement of composition: "Paraffines 95 per cent. combined with Resina Palaquium and Oleum Picis Liquide." This means little and probably was so intended. Oleum picis liquide is oil of tar and resina palaquium is gutta percha. Simple paraffin would no doubt answer as well as this secret mixture (*Jour. A. M. A.*, July 28, 1917, p. 306).

## BOOK REVIEWS

### ANNALS OF SURGERY, AUGUST, 1917.

In this issue Dr. Ernest Sachs of St. Louis has an interesting article on Tumors of the Gasserian Ganglion, and Dr. Willard Bartlett of St. Louis contributes an article on an Anatomic Substitute for the Female Breast. There are ten other articles on surgical topics and the transactions of the New York Surgical Society. J. B. Lippincott Company, Publishers, Philadelphia.

**FIRST LESSONS IN SPOKEN FRENCH FOR DOCTORS AND NURSES.** By Ernest H. Wilkins, Algernon Coleman and Ethel Preston. The University of Chicago Press, Chicago.

This little book admirably fulfills the purpose for which it was compiled, namely: (1) to understand what may be said to them in French; (2) to make themselves understood in French; (3) to understand printed French.

**THE MEDICAL CLINICS OF NORTH AMERICA.** Volume 1, No. 1 (The Johns Hopkins Hospital Number, July, 1917). Octavo of 193 pages, 14 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Published bimonthly. Price, per year: Paper, \$10; cloth, \$14.

This is the first issue of the new publication to take the place of the Chicago Medical Clinics. The book is replete with informative articles by Theodore C. Janeway, Lewellys F. Barker, Herman O. Mosenthal, Thomas B. Fletcher, Louis Hamman and Thomas R. Brown. It is printed in the excellent style that characterizes the works from the W. B. Saunders Company press.

**A MANUAL OF NERVOUS DISEASES.** By Irving J. Spear, M.D., Professor of Neurology of the University of Maryland, Baltimore. Cloth. Price, \$2.75. Pp. 66, with 172 illustrations. Philadelphia: W. B. Saunders Company, 1916.

This book is very well written, concise and easy to read. The section on the anatomy and physiology of the nervous system is very good, the fundamental points being presented in such a way that they can be easily comprehended. The diagrammatic illustrations of the brain and spinal cord give a graphic picture that is easily grasped, allowing a mental picture that would be difficult to obtain from a description of their anatomical relations.

The various reflexes and the manner in which they may be elicited are carefully considered but their significance is not explained nor any mention made of the disturbance that they might be due to.

The subject matter in the chapter on the pineal gland is not very well chosen or at best there is too much repetition. It is mentioned that in some pathological conditions calcareous bodies may be demonstrated by the Roentgen ray but it has been shown that calcareous bodies may be found in the apparently normal gland, that is, symptomatically there was nothing to indicate a derangement of the gland.

The illustration in the section devoted to Fredreich's ataxia does not bring out clearly the points that should be shown nor is the distinction, between Fredreich's and Marie's form of ataxia well brought out.

The author classes one form of spinal cord tumor as a gliosarcoma, but it is difficult to understand, from his discussion, just what is to be included under that term. It seems to me if we take into consideration the origin, gross appearance and microscopical findings of a glioma and a sarcoma, there is no reason for confusing the two neoplasms. It is possible that we find the two associated in extremely rare cases but the condition is so rare that it is hardly to be considered.

In the part given to the discussion of cerebral tumors, all growths are included that occur within the skull cavity without reference to the part of the brain involved. A more appropriate heading would be brain tumors.

The book is commended. The diseases of the central and peripheral nervous system, both organic and functional are taken up in their order and discussed briefly as to symptoms, diagnosis, prognosis and treatment. The author has given us a number of points that are of distinct practical value, especially to the busy practitioner who has not the time to read an exhaustive treatise on the various subjects. Some errors in the index should be corrected in a future edition.

A. L. S.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee  
ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

OCTOBER, 1917

Number 10

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION { W. H. BREUER, M.D., Chairman  
COMMITTEE { S. P. CHILD, M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### CORRECTION OF DEFORMITY DUE TO COMPLETE LOSS OF NOSE AND MOST OF THE ALVEOLUS AND HARD PLATE \*

J. F. BINNIE, M.D.

AND

W. T. STARK, D.D.S.

KANSAS CITY

T. W. T. In childhood patient suffered from a lesion of the skin of the nose which his doctor pronounced cancer and proceeded to treat by means of escharotics placed inside the nose. The result of the treatment was destruction of the whole nose, upper lip, three fourths of the alveolus of the upper jaw and most of the hard palate. The septum nasi was completely destroyed, likewise the inferior and part of the middle turbinates; the ethmoidal cells were exposed (Fig. 1). For fifteen years an artificial nose and upper lip were worn (Fig. 2) but were unsatisfactory because of their weight, etc.

In November, 1916, the patient came to us requesting that if possible we should perform a plastic operation to provide him with an upper lip and at the same time provide a lighter and more comfortable artificial nose and palate. This we consented to attempt.

Operation at Christian Church Hospital, Nov. 24, 1916.—Gas, ether anesthesia. The remnants of upper lip on each side were separated from the subjacent bone until they, along with a sufficiency of the cheeks, were rendered so freely mobile that the incisions A B C, A' B' C' (Fig. 3) formed two convenient flaps. When the cut surface A B of one flap was united by sutures to the corresponding cut surface A' B' a satisfactory new upper lip was obtained. But the lower lip was necessarily so contorted and there was so much microstoma produced that the

mouth had to be enlarged. To effect this the lateral incisions X Y and X' Y' were made horizontally outwards from the angles of the mouth. The oral mucosa was sutured to the skin along the upper edges of these two incisions to provide the upper lip with more horizontal length. The two triangles z, z', were incised. These consisted of the whole thickness of the cheek,



Fig. 1.

and had as their bases the lower edge of the horizontal incisions. When the vertical edges of the triangles were united by horizontal sutures the lower lip assumed its natural position and the mouth was of proper size. To support the new formed upper lip a hard rubber splint (Fig. 4) (previously prepared) corresponding roughly to the normal line of the alveolus was inserted and was held in place by a long moulded post which could be strapped to the forehead. The wound healed well but before any permanent prosthesis could be fitted it was

\* Read by title at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.



Fig. 2.

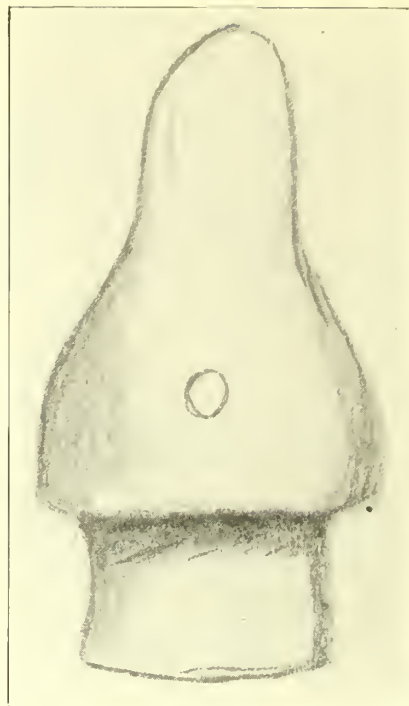


Fig. 4.

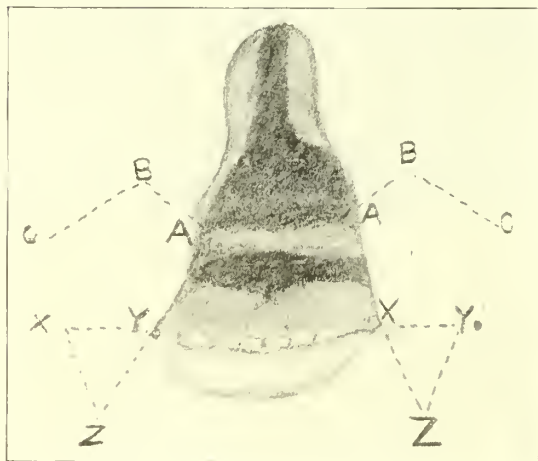


Fig. 3.



Fig. 5.





Fig. 6.

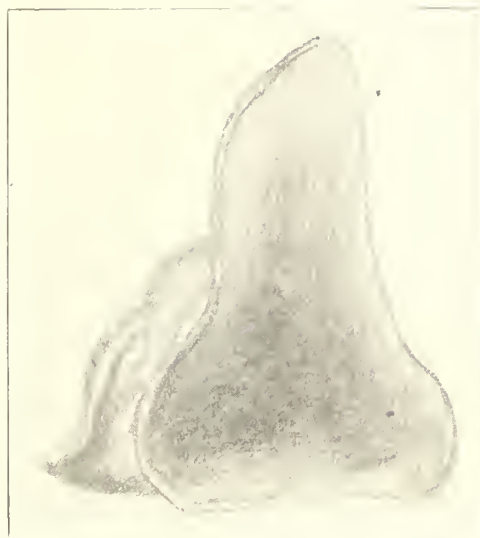


Fig. 9.

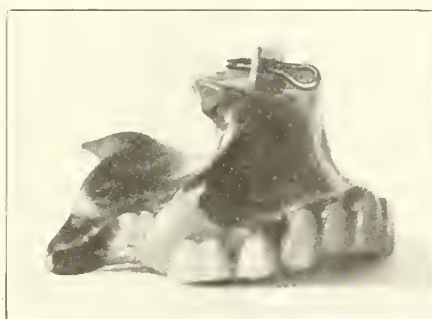


Fig. 7.



Fig. 8.

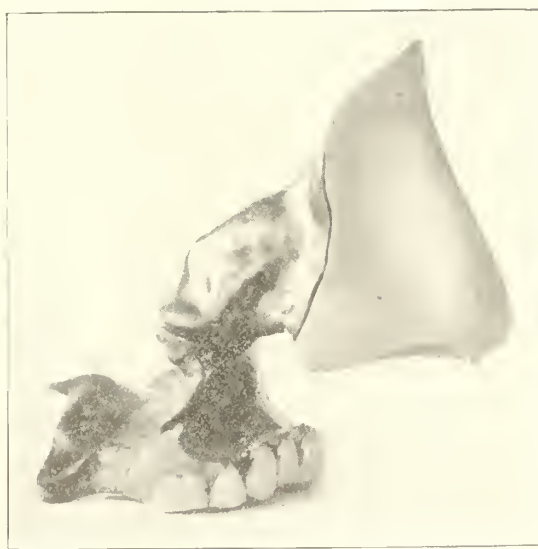


Fig. 10

necessary to wait until there was complete cicatrization of all the unavoidably left raw surfaces. During this delay contraction of the line of union of the lip produced the deep notching seen in Figures 5 and 6. From this time the problem became purely prosthetic. There had to be provided

1. A substitute for the palate and alveolus (Fig. 7).

2. An artificial nose (Fig. 8).

3. A means of uniting the nose and the palate by an apparatus which would fill the nasal cavity (Fig. 9).

These three requirements were fulfilled by an apparatus made in three pieces. It was found best to cover the modeled nose by a separate shell of light pink rubber to which the proper coloring could be given.

Modeling compound placed on a suitable tray (made for this case) was forced against the remnant of the palate, into the space between the palate and the new upper lip as high up as the upper edge of the new lip. While still pliable the compound was pressed down over the remaining portion of the nasal floor and level with the upper edge of the lip. After chilling the compound *in situ* with ice water it was removed and a plaster cast of it was made. On this cast was made an artificial palate more or less as an artificial denture is constructed. In the top of this apparatus a gold bar was implanted (Fig. 7).

When the artificial palate was in place a thin sheet of modeling compound rendered pliable by hot water was placed over the cavern which represented the site of the nose. With the finger this sheet was coaxed into the cavity against its sides and against the upper surface of the apparatus representing the palate. Cold water rendered the material rigid and on its removal it gave an accurate hollow mould of the hiatus to be filled. A plaster cast made from the mould provided a perfect working model of the nasal opening, its edges and the upper surface of the artificial palate. With thin paraffin wax (base plate wax) a hollow plug to fill this opening was fashioned. This model was reproduced in vulcanized rubber and constituted a nasal plug (Fig. 9).

The so-called nasal plug is a very irregular cone, the base of which is entirely open with edges exactly shaped to the edges of the nasal defect (and upper edge of the new lip). The gold bar already mentioned as being implanted into and projecting from the top of the new artificial palate enters into this conical cavity by passing through a hole in its floor. A hole bored through the gold plate permits the insertion of a split pin by means of which the two pieces of apparatus (palate and hollow nasal plug) are united. Each of these pieces unless

united to its fellow would fall out of place; when held together they support each other and remain *in situ*.

A nose was now modeled from a mass of paraffin. The base of this nose was made to correspond to the edges of the nasal defect and so slotted that the edges of the hollow nasal plug fitted into it. The nose was reproduced in Claudius Ashe Sons & Co.'s light pink rubber and after finishing was solarized in alcohol and produced the nearest approach to flesh color possible in this material.

A metal hook was fixed inside to the apex of the hollow conical nasal plug, a corresponding hook was fixed inside the new rubber nose near the bridge. A rubber band stretched between these two hooks held the new nose satisfactorily against the hollow plug the edges of which fitted into the slot around the base of the nose.<sup>1</sup>

Rialto Building.

#### A MILK-BORNE TYPHOID OUTBREAK IN CHILDREN \*

SAMUEL T. LIPSITZ, M.D.  
ST. LOUIS

Prior to March of this year cases of typhoid fever were being reported to the health authorities at the rate of two or four cases a month. But during the early part of March, six cases were recorded. *All of these were in children.*

On April 9, a young man, 18 years of age, came under my observation and within three days it became apparent that he had typhoid fever. Within a week's time four additional cases, all in little children, applied for treatment. All these patients were very sick, lived in the same neighborhood, and were unquestionably typhoid. This sudden increase in the number of typhoids was so striking that it became manifestly imperative to trace the source of the infection. On account of its evident predilection for children I readily surmised that milk was the offending agent. On inquiry it was learned that the milk supply to all these cases came from the same dairy. This was amply sufficient for a beginning.

Within a few days several other cases belonging to other physicians and some cases in the Jewish Hospital and in the Children's Hospital were added to this list. All these patients had obtained their milk from the same source. When these data were brought to the attention of the health authorities the offending dairy, which is located in the most congested poor district in the city, was closed and an inspection of

1. Figure 10 shows the three pieces of apparatus assembled; Figure 6 the same in place.

\* Presented at the meeting of the St. Louis Medical Society, June 9, 1917.



the entire milk route was made. Several more cases were brought to light in this way.

An attempt to locate the ultimate source of infection was made. The local distributing dairy obtained its entire milk supply from a dairyman located in the outskirts of the city. This man also supplied milk to two other distributors, but on neither of their routes were there any cases of typhoid. This, of course, made it apparent that the suspected dairy was at fault.

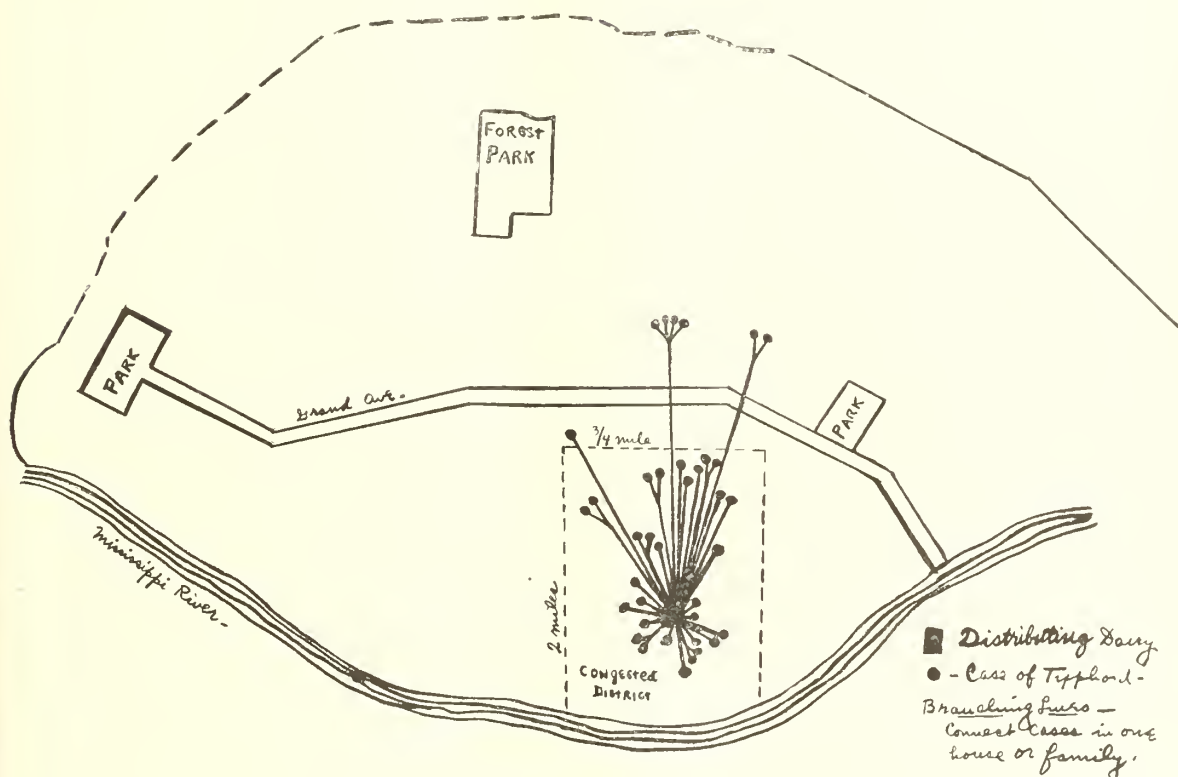
Stool cultures were obtained from every one on the premises of the infected dairy, but no typhoid carriers were found.

As there were no provisions for sterilization of bottles or for the pasteurization of milk at

purpose of preventive inoculation. Some 1,740 injections of typhoid bacterin were administered, most of the applicants receiving three injections.

There are some features of particular interest which may be gleaned from this outbreak. It is not often that one may see so many cases of typhoid in children at one time. This epidemic was almost entirely limited to children and adolescents.

Typhoid in children under 3 years of age is rare. Seventy-four per cent. of our cases were in children under 16 years; 14 per cent. were in children 3 years or under; 26 per cent. were 17 years and over. Holt states that he has never seen an undoubted case of typhoid fever



this dairy, it must be concluded that the most likely cause of the dissemination of the infection was the delivery of milk to a house in which typhoid fever was present. The bottles became infected in some manner, were brought back to the dairy, were again filled with milk or washed together with the other bottles, and in this way the infection was spread. Fortunately, the moment the dairy was closed the outbreak was checked. The only new cases that subsequently developed were those that were incubating at the time.

In order to prevent the further spread of the disease the health department established temporary stations in the neighborhood for the

under 2 years of age and believes it to be rare. In his experience no case has occurred in three New York hospitals for nearly twenty years where about 40,000 cases have been treated. It is only in epidemics that cases are discovered in infants. It is not until after the fifth year that typhoid can be said to occur frequently.

Until this outbreak, I had never seen a case in a child under 5 years. The usual rarity of typhoid in infants makes this outbreak of particular interest in that respect.

In this series there was 1 case 1 year of age; 2 cases  $1\frac{1}{2}$  years; 1 case  $2\frac{1}{2}$  years; 1 case 3 years; 2 cases 4 years; 1 case  $4\frac{1}{2}$  years; 2 cases 5 years; 1 case 7 years; 1 case  $7\frac{1}{2}$  years;

4 cases 8 years; 3 cases 9 years; 2 cases 10 years; 2 cases 12 years; 2 cases 13 years; 1 case 16 years; 1 case 17 years; 2 cases 18 years; 2 cases 20 years; 1 case 23 years; 1 case 28 years; 1 case 31 years; 1 case 50 years. Total, 35 cases; 26 cases under 16 years, or 73 per cent.; 5 cases 3 years or under, or 14 per cent.; 9 cases over 17 years, or 26 per cent. There were 17 males and 18 females.

It is often stated that typhoid fever in children is a comparatively mild disease, that complications are uncommon, and that the mortality is between 3 and 5 per cent. Three patients of this series died, showing a mortality of 8.5 per cent. One case, 2½ years old, developed laryngeal stridor, though no diphtheria was demonstrated. One child of 9 years died of perforating ulcer and peritonitis; one of 10 years of intestinal hemorrhage.

A number of complications were noted: One child developed measles on the twenty-fourth day; three had intestinal hemorrhages; one had early hematuria and one later developed it; one had acute nephritis; one perforating ulcer and peritonitis with fatal termination; one laryngeal stenosis, meningismus and death; one had double lobar pneumonia as a late complication; one had acute cholecystitis and pyelitis. Five patients, or 14 per cent., suffered relapse.

The course of the disease was more violent than is usually expected in children, showing that some typhoid organisms may be more virulent than others or that the number of organisms that were introduced in these cases must have been overwhelming. An examination by Dr. Baldwin, city bacteriologist, of a supposedly fresh bottle of milk obtained from the infected dairy showed 25,000,000 bacteria per cubic centimeter. In view of the fact that commercial milk is expected to have a much smaller count this may be significant. No typhoid bacilli were demonstrated in this milk. This, however, is not important, as the search for this organism in milk is usually futile. Five cases of this series were mild; thirteen were moderately severe; seventeen were very severe and toxic. Of the seventeen very severe cases all were under 18 years of age. Most of the patients had a temperature ranging between 103 and 105 F. The average duration of the fever was thirty-eight days. One patient had fever for sixty-one days; one for sixty-four days; one sixty-five days; one seventy days, and one seventy-five days. Of these patients, one was 18 years old and the others were little children. Four patients who contracted their disease early in April are still febrile. All of them have suffered relapses.

The pulse in these cases was more frequent than one usually finds in adults.

As concomitant features, one patient had endocarditis and is still sick. It is possible that

the endocarditis is responsible for the persistent fever. One child of 4 years had gonorrheal vaginitis; one had tuberculosis of the elbow and ankle and died through hemorrhage of the bowel.

Of prodromal symptoms, nine had cough and bronchitis; 9 had headache; 4 diarrhea; 3 tonsillitis; 2 vomiting; 4 chills; 3 had malaise and fever; 9 were constipated, 9 were normal in this respect, and the others were not noted. Diarrhea is not as frequent as we are led to believe.

Rose spots were present in twenty-three, or 66 per cent.; they were absent in seven, and were not observed in five. One child had three crops of rose spots, each about two weeks apart, the last appearing in the ninth week.

The spleen was palpable in twenty cases and was not palpable in ten cases. In none of these cases was it greatly enlarged.

The Widal reaction was found positive between the tenth and twenty-fourth day in twenty-six cases, or 93 per cent. of those examined. It was negative in two cases. It was not employed in the others. Four Widal reactions were reported positive by the city bacteriologist but were later reported negative at the hospitals in which the cases were treated. It is hardly likely that a Widal which is once positive will become negative during the course of the fever. As these cases were clinically typhoid a positive Widal should be expected. This discrepancy may be explained by differences in the interpretation of the various phases of the agglutination test. In two fatal cases, the Widal was weakly positive in one and negative in the other. This lack of agglutinin may be in some way associated with the cause of death.

Of twelve blood cultures which were taken, five were positive and seven negative. If not obtained the first week of the disease the blood culture may be expected to be negative.

The leukocyte count was obtained in nine cases. *Case 1*, 10,200 early count, 6,800 one week later. *Case 2*, 12,000, two days later 6,200. *Case 3*, 7,400, one week later 6,200. *Case 4*, 16,000 early, two days later 11,000. *Case 5*, 20,800, one day later 10,600. *Case 6*, 6,600, one day later 5,000. *Case 7*, 5,000. *Case 8*, 2,600 to 4,000. *Case 9*, 5,000. A leukocytosis may be an early phenomenon, but a leukopenia subsequently develops.

Most of the patients were treated in the routine manner. Eighteen received their treatment in hospitals and 17 at home. Of the latter, 6 had the services of a trained nurse. Of the fatal cases, two were in the hospital and one at home with a trained nurse. Two patients received typhoid "phylacogen" treatment at irregular intervals without any definite results. One patient received typhoid bacterin without any striking effects. One patient was given ipecac



treatment. Some of the patients were on a liquid diet while others received high caloric feeding.

In conclusion it may be emphasized that there are important lessons to be gleaned from an outbreak of this character. Cases of typhoid fever should be reported to the health authorities immediately after the diagnosis is made. The attending physician should attempt to trace the source of the infection in each case and when discovered further infection from this source should be stopped. Each community must employ most rigid supervision of its milk supply and in this manner epidemics of considerable magnitude may be prevented.

Metropolitan Building.

#### DIAGNOSIS AND TREATMENT OF CERTAIN SUBACUTE AND CHRONIC JOINT CONDITIONS\*

FRANK D. DICKSON, M.D.  
KANSAS CITY

It is the purpose of this paper to present for consideration a few joint conditions which occur with moderate frequency and which are at times overlooked. The limits of the paper prevent an exhaustive discussion of each of the conditions individually, but it was hoped that presenting the subject in this way might serve a more useful purpose than devoting the time to one or two conditions alone.

The joint conditions are: 1. Static arthritis of the knee. 2. Traumatic arthritis of the shoulder. 3. Epiphysitis of the hip. 4. Loose bodies in the knee-joint.

*Static Arthritis of the Knee.*—This is a condition in which we get a synovitis of the knee-joint characterized by intermittent attacks of hydrops and pain, usually of a dull, aching character. The symptoms subside under rest, only to reappear again after a time, usually following overexertion or overuse. Roentgen ray shows perfectly clear bones, or in some cases, in young children, the indistinct epiphyseal line characteristic of rickets.

The cause of this condition is faulty weight-bearing due to knock-knees or pronated feet or more generally both, as they are usually associated. With a fairly marked degree of knock-knees the body weight comes almost entirely on the internal condyle, instead of being distributed over the entire joint surface. The result is undue pressure on the external condyle and internal tuberosity of the tibia, strain on the internal lateral ligaments of the knee and probably pinching and irritation of the synovial fringes with resulting hydrops and pain.

The following are typical examples of this condition.

CASE 1.—S. N., aged 5½ years, complained for some months of severe pain in the ankle, calf of leg and especially the knees, which became slightly swollen. The attacks occurred several times a week, usually after she had played a great deal. Child lost weight and was cross and irritable. Examination of child showed moderate signs of an old rickets, was knock-kneed (2½ inches between malleoli) and had decidedly pronated feet. Child did not have a temperature; general examination by Dr. Duke revealed no general trouble; tonsils had been removed. X-Ray showed indistinct epiphysis.

*Treatment.*—Knock-kneed braces and cod-liver oil and malt. Latter child would not take. Last seen two weeks ago and has had but one attack of pain in the last four months and that shortly after braces were applied and had not worn them on that day. Child also greatly improved in general health and disposition. Now has 1¾ inch knock-knee.

CASE 2.—J. N., aged 15. Pain and swelling in left knee when she walked any distance. Medical examination and x-ray negative. Had knock-knee of 2½ inches almost entirely in the left knee.

*Treatment.*—Osteotomy of the left femur two years ago. No trouble since that time. Last heard from in February, 1917.

CASE 3.—G. W., aged 21. Pain in right knee for two years with swelling. Came on first after skating and returns when on feet much. Knee had been immobilized in plaster for seven months and pronounced periostitis. General examination by Dr. Meyers, who referred the case, negative. X-ray showed absolutely normal bone structure except some increase in the size of the internal condyle. There was present a marked knock-knee on the right side (3 inches) and pronated foot. A diagnosis of static arthritis knee made and osteotomy advised.

It is this type of case which is frequently diagnosed tuberculosis or rheumatism or growing pains and treated as such or not treated at all and which in later life results in stiff and painful knees in a number of cases, such joints being weak and potential sources of trouble.

*Traumatic Arthritis of the Shoulder.*—Under this heading is included fractures in the neighborhood of the shoulder-joint.

It is quite common in people of middle-age and over to have an injury to the shoulder, either mild or severe, followed by stiffness and pain in this joint. The chief complaint is constant pain in the shoulder and arm and inability to use the arm. An examination usually reveals a tender shoulder-joint with limitation of motion in the direction of abduction, internal, and especially external rotation.

A careful investigation will usually elicit the fact that following an injury, as a fall, dislocation or fracture, the arm has been dressed in a position of adduction and internal rotation, that is, with the arm at the side. By far the greatest percentage of injuries about the shoulder result from an abducting force. In such injuries there is in practically every case a tearing of the anterior-inferior part of the capsule, so that if the arm is held in a position

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

of adduction and internal rotation for a period of time sufficient to allow healing there results contraction of this part of the capsule and consequent limitation of motion in the directions of abduction and rotation. Also the branches of the brachial plexus, which lie in close proximity to this part of the capsule are frequently caught in the scar or are subject to undue pressure and we get pain referred down the arm.

In people of the age we are speaking of another causative factor should not be overlooked, in fact we consider it of prime importance, that is, foci of infection which play such an important part in producing changes in joints, usually hypertrophic in form. Chronically infected tonsils and root abscesses about the teeth are found frequently in these cases and are partly responsible for the impairment of joint function, we feel sure.

*Treatment.*—It has been our practice in all injuries to the shoulder, except dislocation, to dress the arm in a moderate degree of abduction and external rotation and fix in plaster. Massage and passive motion are begun early under proper supervision. At the same time teeth and tonsils are examined and advice given. The results have been satisfactory.

In cases seen some time after the injury, the arm is put absolutely at rest for ten days to two weeks. This is particularly important if violent movements have been given in an effort to improve function, as is so frequently the case. The object of this is to quiet the joint down. All foci of infection are cleaned up if possible. Following this, massage and passive, and later active motion is given with the utmost care, never making the movements violent enough to cause pain and leave the arm sore and stiff. By handling the case in this way a useful and fairly pain-free shoulder can be obtained.

CASE 4.—Mrs. C. Impacted fracture of the head of the humerus, January, 1916. First seen April, 1916, four months after injury. Had extremely painful shoulder which she could not move at all. Had been having severe manipulations of the shoulder.

*Examination.*—There was 30° of abduction and no measurable rotation. There was atrophy of the arm and scapular muscles. All movements were painful. X-ray showed an old fracture in good position with moderate amount of callus formation. No foci in teeth or tonsils found.

*Treatment.*—Arm put at rest for two weeks. At end of this time there was an improvement of 50 per cent. in all movements. Following this careful massage and manipulation were given four times a week and at end of four weeks could adduct to right angle, external rotation was same as other arm, internal rotation fair but could not get hand to small of back. January 5th the patient was etherized and the adhesions broken up and the arm dressed in plaster of abduction and external rotation. Massage and movement started on third day and continued for ten days. A report from patient on April 17, 1917, stated that she had practically normal use of shoulder and no pain except when she overused the arm at times.

CASE 5.—Mrs. S., aged 55. Fell July, 1916, and injured right shoulder (abduction). Seen October, 1916, when she complained of pain in arm and shoulder and limitation of motion. X-ray showed very slight hypertrophic changes.

*Examination.*—Abduction of 70°, internal and external rotation markedly limited so that patient had very little use of arm. Teeth showed several root abscesses.

*Treatment.*—Arm put at rest for two weeks and four teeth extracted. Massage and careful passive and active movements four times a week for six weeks. Discharged December 5th, with a practically normal shoulder, except for slight limitation of internal rotation. To quote her own words "she could do anything she wished with arm."

*Epiphysitis of Femur.*—In addition to acute epiphysitis of the femur, which develops into an osteomyelitis with marked destruction of the diaphysis, we have occurring from time to time a low-grade epiphysitis which starts as an acute process with elevation of temperature, severe pain and rigidity in the hip-joint. The process remains localized and does not invade the shaft of the bone. After a period of from two to three weeks the acute symptoms subside, leaving a more or less crippled and painful joint fixed in a position of adduction and flexion.

Such joints are rendered almost useless because of the pain and limitation of motion, and the individual is practically incapacitated. Roentgen ray shows a more or less destructive process about the head of the femur and new bone formation confined to the epiphysis.

The acute onset with the occurrence of bone destruction, with regeneration points to an infectious origin. In a very definite percentage of such cases a history of severe tonsillitis immediately preceding the attack justifies us in establishing a direct relationship between the two conditions. The presence of chronically inflamed tonsils containing pus in these cases is also significant, when found after such an attack as just described.

It is, of course, well known that infected tonsils are frequently the cause of chronic hypertrophic joint changes, also that they may cause chronic synovitis, but the fact that they may play an equally important part in an acute arthritis of a destructive character seems to be frequently overlooked. It is our opinion that in a number of cases the infection from the tonsils is the cause of acute epiphysitis of the type described, and that after the subsidence of acute symptoms the local condition is kept active by foci in the tonsils. When in such cases we find almost immediate improvement following the removal of the offending tonsils one is justified in considering them the source of the trouble.

CASE 6.—J. J., aged 27. Had a sore throat for several days. There was a sudden rise of temperature with pain and stiffness in the left hip, the slightest movement of which was extremely painful. Attack lasted three weeks. Since that time, a year and a half ago, has not been able to move hip because of pain and has been confined to bed or a chair.



*Examination.*—Left hip painful and almost completely ankylosed in flexion and adduction. One inch shortening. Tonsils very bad. History negative as to gonorrhea; Wassermann negative; x-ray of teeth negative. X-ray of hip shows moderate bone destruction and considerable proliferation about hip-joint.

*Treatment.*—Weight extension in abduction for four weeks and tonsils removed. At end of this time, hip straight and no pain. Plaster cast in abduction and extension for six weeks longer. Case removed January, 1917. Seen last May, 1917. No pain, has 30° of motion in hip, walks with some limp but has been at work for past three months.

CASE 7.—W. S., aged 14. Trouble began one year ago with tonsillitis; three days later pain and tenderness in the left hip with continued temperature. Temperature subsided in about three weeks but hip was drawn up and painful and could not get about. Was treated by an osteopath for awhile but hip got worse, then got about on crutches for some months but could not use left leg.

*Examination.*—Left hip flexed to 30° and adducted. Very painful on motion, one inch shortening. Tonsils large and contained pus. Boy looked toxic. Teeth were negative. X-ray showed bone destruction and proliferation.

*Treatment.*—Extension for six weeks and tonsils removed. Correction not satisfactory and under ether hip put in plaster in extension and abduction. Cast removed in eight weeks (February, 1917). No pain, no deformity, no shortening, some motion in hip. Last seen in May when he had practically normal motion in hip, was going to school and playing about as usual.

This case had been diagnosed as a tuberculous hip and a gloomy prognosis given the parents.

Early diagnosis in these cases is important because the early institution of local treatment prevents deformity and limits the amount of destruction and the removal of the source of infection, i. e., the tonsils, materially shortens the course of the disease.

*Loose bodies in the knee-joint.*—Under this condition I wish to report two cases of osteochondritis dissecans. It usually occurs in men and in those who follow an occupation in which the knee-joint is subjected to violent use, as a kneeling occupation. There is usually a history of indefinite symptoms of weakness extending over a long period of time. The condition is usually one of weakness rather than definite disability. As time goes on locking occurs from time to time, but the locking is not such as we get in a dislocation of a semilunar cartilage, but usually lasts only for a short time, is much less painful and there is much less accompanying synovitis.

The joint rapidly resumes function when the locking disappears which is not the case with a dislocated semilunar. Roentgen ray shows a defect in the articular surface of the femur almost always on the outer side of the internal condyle. One or two loose bodies may be seen in the joint which are free or attached by a pedicle.

Various theories have been advanced to explain this condition which need not be entered into here except to say that trauma is most

probably the cause as advanced by Codman and supported by Brackett. The fact that the area of detachment is at the most exposed part of the condyle and at the attachment of the posterior crucial ligament, which may serve as a pedicle, tends to give support to the traumatic theory of origin.

CASE 9.—S. A., aged 27. Railway fireman. In 1914 was struck by the door of a firebox on left knee which was flexed at the time. No trouble for ten days, and worked. Knee then began to swell and could not get it straight but could not remember any locking before this time. Was put in a plaster for three months and when removed knee was stiff. By working with knee has been able to get more motion in it but never any complete extension.

*Examination.*—Patella fixed at upper outer edge, can flex knee but not completely, can extend to 160°—20° short of a straight line. Knee not swollen and has good contour. X-ray shows a defect in the internal condyle and loose bodies. Diagnosis osteochondritis dissecans and removal of bodies advised. This has not been done as yet.

CASE 10.—F. S., aged 35, referred by Dr. W. W. Duke. Business man. Trouble began in right knee in 1897 when he began to have locking of knee. The year preceding had fallen and struck knee against a steel rail. In 1900 fell again on knee and next day could not straighten it out. Full extension was not possible for almost a year. At this time knee was treated as tuberculous and had twelve injections of iodoform. From this time had continued trouble with locking at frequent intervals so that for past five years has had stiff knee.

*Examination.*—Atrophy of thigh and leg muscles, contour of knee normal, patella movable, had about 20° of motion. X-ray showed a loose body lying in a cavity of the internal condyle and a second body in posterior part of joint.

Operation November, 1916, Jones L-shaped incision with knee in flexion. Small body size of pea found attached to posterior crucial ligament and a body the size of a pecan-nut embedded in the internal condyle which was not adherent and came out without dividing any adhesions. Plaster cast for ten days. After removal of cast knee was stiff due to the contractures, the result of maintaining the knee-joint in extension for five years. Was given massage and passive motion for several weeks and then allowed to use the leg as usual. Last seen on May 10, 1917, and has had no pain in knee since operation, no swelling, extension to 180° and flexion to 85°, no limp and uses the knee practically as well as the other one.

Waldheim Building.

## TUBO-OVARIAN INFECTIONS\*

H. S. McKAY, M.D.  
ST. LOUIS

While the subject of pelvic infections belongs quite properly to the gynecologist, such a large number of these cases fall into the hands of the general surgeon that he, of necessity, must give most careful consideration to the management and operative treatment of such diseases.

It is essential that careful attention be given

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

the etiology of the infection. Different organisms have different life histories and their action in the tissues is followed by certain well-defined differences in the pathology produced. A study of the bacteria found in pelvic infections by many observers has revealed the presence of many micro-organisms, but by far the greater number of infections are due to the gonococci and streptococci. The determination of which of these is the causal agent is in many instances of great value to the surgeon. Gonococcic and streptococcic infections differ widely in their clinical history, virulence and the location of the pathologic lesion. Gonorrheal infection extends along the cervical and uterine mucosa to the tubes, thence to the ovary and peritoneal cavity. The lesion most characteristic is the sactosalpinx, a suppurative salpingitis with or without an ovaritis or peritonitis.

Pus of gonorrheal origin confined in a tube becomes sterile in a comparatively short time, six weeks often, and gonococci are rarely found after three months. In exceptional cases, as shown by Neisser, they may survive much longer, even after eight years in some instances. It is probable, however, that the virulence is greatly attenuated after long periods.

Pelvic infections of streptococcic origin, as a rule, follow abortions, miscarriages, instrumental deliveries, intra-uterine instrumentation, and according to Watkins, infections may occur through the blood stream from a distant focus, as for instance a streptococcic sore throat. It is my opinion that adnexal infections occur through the blood stream more frequently than heretofore thought. I have observed two cases recently which I believe to have followed on distant foci of infections. Streptococcic infections do not become sterile as readily as those of gonococcic origin. They may remain dormant for years to be lighted up by childbirth or some operative procedure, and the more experience one has with virulent streptococcic infections, no matter where located, the greater is his respect for them. The streptococcic infections travel through the uterine wall and find their way into the connective tissue and parametrium and not infrequently to the peritoneum, causing a peritonitis. The characteristic lesion is in the parametrium.

In the majority of instances the character of the infection can be determined by a careful history and the location of the lesion. In the gonorrheal type one can nearly always ascertain the probability of infection, particularly in the unmarried. The history of urethritis with burning on urination or the leucorrhea which is irritating and stains the underclothing, or a former inflammation of Bartholini's glands evidenced by pain and swelling, is significant. Crossen states that "purulent inflammation beginning in a normal adult nonpuerperal vagina

or uterus and later extending out into the pelvis may be set down as almost certainly gonorrheal. Even in the married woman the tell-tale evidence of Neisserian infection can often be obtained by a discovery of some of the above evidence. In the case of a married woman, the history of abortion, miscarriage, the use of instruments in delivery, curettage, or the presence of a lacerated perineum or cervix is very significant and streptococcic infection is likely.

The location of the lesion, in pelvic infections, is of the greatest importance in arriving at an opinion as to the etiology, and taken into consideration along with the history, can usually be cleared up. Crossen states "The distinguishing characteristics of a parametrial mass (chronic) are: (a) its situation in the connective area, usually in the broad ligament; (b) its low situation in relation to the uterus, often coming far down beside the cervix; (c) its intimate blending with the uterine wall, as though it were a part of the same; (d) its intimate blending with the pelvic wall, as though it were an outgrowth from that structure, and (e) its hardness, often being so hard as to simulate a cartilaginous or bony tumor growing from the pelvic wall. The tubo-ovarian mass, on the other hand, is distinguished by its being situated high in the tubo-ovarian region, or prolapsed in the culdesac; by its not blending so intimately with the uterine wall, a distinct groove usually marking the point where the two come in contact; by its not blending so closely with the pelvic wall; by its presenting to the examining finger a portion of the rounded outline of the ovary or tube, and by the absence of the cartilaginous hardness often seen in chronic parametrial masses."

In the management of acute and subacute pelvic infections, the dictum so tersely laid down by Simpson has been followed and approved by nearly all observers. Simpson states that no case should be operated until the temperature has been normal for a period of three weeks, or until it is possible to examine the patient without finding an exudate, or until such examination fails to excite an exacerbation of temperature or an increase in the leucocyte count, or until the count is below 11,000 and remains below 11,000. Following these rules Simpson operated 475 cases with only four deaths. In the face of this experience, together with that of many other surgeons, the question of when to operate would seem settled. This, of course, does not refer to the universally recognized and wise procedure of opening all frank abscesses which can be evacuated without traversing a free serous cavity. Simple vaginal drainage of single pelvic abscesses which are adherent to the vaginal wall is followed by prompt results as a rule. However, one occasionally encounters a case of multiple abscesses of the pelvis



in which one abscess only comes in contact with the vaginal wall. Drainage through the vagina in such a case is not followed by a cure, since only one pus cavity is reached, the others remaining to continue the trouble.

In the management of the acute cases which come into the hospital with a temperature ranging from 101 to 104, marked tenderness in the pelvic region and distention, I have followed the following routine: A blood count is made and an examination sufficient to determine the condition. The patient is placed in bed in the Fowler position. An ice bag is placed over the lower abdomen, saline proctoclysis instituted and sufficient morphin is given to obtain intestinal quiet. If there is great distention or vomiting gastric lavage is resorted to every six hours. Food and liquids are withdrawn by mouth and saline solution given subcutaneously if not retained by rectum. Nearly every case will quiet down in forty-eight hours after which time nourishment per mouth can be resumed and laxatives administered. Rest in bed and careful management for from three to five weeks will usually suffice to find the patient with a normal temperature and leucocyte count. Many of these cases leave the hospital, never having further trouble and requiring no further operation.

Occasionally one meets with a case which despite the most careful handling as above outlined seemingly will not clear up. The temperature will not come to normal and the leucocyte count is out of proportion to the temperature and other symptoms, showing the lack of resistance to the infection. The following is one of several cases illustrating the condition just described: Miss O. F., 26 years of age, was admitted to my service at St. Anthony's Hospital in November, 1916, with an acute pelvic infection following an attempted abortion. Four years previously she had a typical gonorrheal infection followed by two acute attacks of pelvic inflammation. She had missed a menstrual period a few weeks before coming into the hospital, and thinking this due to pregnancy, a midwife was consulted, who promptly attempted an abortion. Hemorrhage soon ensued, which continuing, the advice of a doctor was sought, who immediately proceeded to use his ever-ready curette, expecting to empty the uterus of a fetus or the remnants of a pregnancy. Thirty-six hours later, a chill, high fever and great fear led her to come to the hospital. She was placed in bed and after examination, which revealed masses on either side of the uterus, the above described treatment was carried out. After four weeks she had lost rather than gained ground. Temperature remained 102 to 103; leucocyte dropping from 28,000 in the beginning to 15,000. Her resistance was poor. We decided to operate

her. The operation revealed a large tubo-ovarian abscess of the right side and a tubal abscess with a large infected dermoid cyst on the left side. It was necessary to remove both tubes and ovaries because of the destruction to these organs. A quarantine pack, as advocated by Coffey, was placed in the pelvis, completely shutting off the pelvic cavity from the intestines. She made an uneventful recovery, leaving the hospital in about four weeks with the wound completely closed. She, of course, had not been pregnant at all and had a chronic pyosalpinx lighted up and converted into a mixed infection by the intra-uterine instrumentation done under a mistaken supposition of pregnancy. In a few cases similar to the one just described and in one operated under mistaken diagnosis I have used the Coffey quarantine pack with considerable satisfaction. It prevents the infection spreading to the peritoneum, provides excellent drainage and seems to prevent troublesome intestinal adhesions.

In chronic tubal or tubo-ovarian infections the operator is frequently confronted with very serious problems. His decision as to what course to follow in the removal of pelvic organs is fraught with grave consequences to the patient. I refer to the question of conservative or radical surgery. The pathology in many cases is such that little is left to choice. The distressing condition in which the young woman finds herself after the removal of her sexual organs demands careful consideration from the surgeon and gynecologist. The frightful nervous phenomena observed after plunging a young woman into a premature menopause is a powerful argument for conservatism. For my part, after the observation of a considerable number of my own cases and a careful study of the literature, I have decided in favor of the conservatives. Rather than plunge a woman into the class as above described and so often seen when they have been oophorectomized, I prefer to risk a second operation. Clark, Graves, Crossen, Watkins and many others agree that conservative ovarian surgery offers splendid results.

In regard to conservative surgery of the tubes, the field is limited. Tubes containing pus should always be removed. When the abdominal ostia are closed the tubes should be removed. The percentage of pregnancies following plastic operations on the tubes is small.

With regard to conservative surgery of the uterus, one has to be guided largely by the condition of the uterus prior to, and ascertained at, the time of operation. If the uterus is chronically diseased, giving rise to distressing leucorrhea it had best be removed, unless the discharge is due to involvement only of that part of the uterus in which the tubes are situated. In such a case the complete removal of the

uterine portions of the tube or an amputation of the uterus just below the tubes, maintaining carefully the blood supply of the uterus and ovaries, would probably be the operation of choice. It is, of course, desirable whenever possible to maintain both ovulation and menstruation, and the best results are obtained when this can be done.

In the light of our present knowledge concerning the function of the ovaries, it is agreed, I think, by all that the uterus after the removal of the ovaries is a useless organ. Therefore, when the removal of both ovaries has been necessary, it is best to remove the uterus also. Leaving it may give rise to troublesome symptoms, and its removal in no wise interferes with the operative results obtained.

The previous nervous history of the individual must never be lost sight of and is an important factor in her behavior subsequent to operation.

Metropolitan Building.

#### DISCUSSION

DR. CARYL POTTER, St. Joseph: It is questionable whether most of these cases come to a normal temperature and pulse within forty-eight hours. A great many of them do, and it has been my experience that they are the gonorrheal cases, although many of these may not subside for ten days.

It has been my experience that the application of one icebag is insufficient. I get better results by covering practically the whole abdomen with ice at intervals depending upon the comfort of the patient and the tendency to necrosis in the skin and subcutaneous structures.

In diagnosis the differentiation should always be made between the streptococcus and the gonococcus infection. Even in intra-uterine infections that can usually be determined by using a glass tube pipette, the piston being made from a piece of string with rubber bands connected to the end of it. The pus or uterine secretion can be tucked into the tube and the organism strained immediately or cultured. Of course the history helps a great deal but this method clinches the diagnosis.

Where there is a gonorrheal endocervicitis in addition to a double pyosalpinx necessitating the removal of both tubes it is nearly always best, if possible, to remove the whole uterus, doing a complete abdominal panhysterectomy; leave the ovaries, where possible, or one ovary, because cessation of menstruation does not amount to much, if you have left enough ovarian tissue to continue the internal secretion. The entire source of gonorrheal infection in the cervix should be removed because these women complain very much of the irritating, distressing discharge, and we all know that as long as an infected cervix is left that discharge will continue.

Concerning packs in the abdomen, the Coffey pack is an excellent one but in simple drainage through the vagina one should never use only a wick of gauze. I saw the bad effects of this forcibly demonstrated in one case that developed a partial obstruction and went on to complete obstruction because of a small kink of ileum attaching itself to the opening in the vaginal vault where a small gauze drain had been removed. This had evidently adhered to the little loop of bowel and the bowel had been pulled down to the vaginal vault and attached itself there. The Coffey pack gives much better service.

DR. WM. H. VOGT, St. Louis: I agree with Dr. McKay so far as management of the acute pelvic infections from gonorrheal or streptococcal origin are concerned. I do not, however, agree with him when he says the gonorrheal infections subside as a rule more rapidly than those of streptococcal origin. I think the reason for that opinion is because we have considerable difficulty in finding the gonococcus after a certain period of time which leads us to believe that the infection has subsided.

I do not believe we get as good a result as we are led to believe from trying to preserve the ovaries, or one ovary, or any part thereof. Probably these cases do not come back to us because they become discouraged and go to some one else, and so a general surgeon or another gynecologist removes these organs later. I know that has been my experience. Those cases that I have treated conservatively have got out of my hands and I have seen other men's cases; eventually they have gone to some one for radical cure.

The removal of both ovaries and the absence of ovulation and menstruation has been a bugaboo to us all, and I believe not rightly so. By the proper treatment of these cases, the complete cleaning out of the pelvis, the patient's general health is going to be better. We can, I think, take care of the internal secretion by the administration of glandular extract in a very satisfactory manner providing we begin early enough, but most of these cases are not given this internal glandular administration early enough. It should be given as soon after the operation as possible. When not given for months after the operation good results are not obtained from its administration.

DR. WM. KERWIN, St. Louis: We all know that 95 per cent. of the cases with inflammation of the pelvis are caused by the gonococcus. The other 5 per cent. are made up by other germs that cause surgical conditions. The gonococcus never causes a surgical condition in the pelvis. It is never essential to operate on any case of ascending gonorrhea; they will get well under conservative treatment, and one-third of the women will bear children, even though both tubes have been invaded by the gonococcus.

Dr. McKay failed to explain why a few of these cases are exceptions to this rule. It is because the colon bacillus creeps in. In such a patient the temperature will never go to normal, but instead will get higher and higher and the patient lose ground. In any case of ascending gonorrhea treated with ice over the entire abdomen, the patient at absolute rest, or, if peritonitic symptoms are present, the other treatment as indicated by Dr. McKay instituted, the patient will be on the road to recovery in three days or so.

But you have not done your patient full justice if you have allowed her to rest quietly in bed for from three to five weeks. It is necessary to do more. When the temperature has been normal for several days, if you institute treatment by high degrees of heat, both dry and moist, you will be able to hasten resolution remarkably. A woman is able to stand 200 degrees of dry heat for a period of one hour if it is applied to a limited area of the abdomen. This not only hastens the absorption of the masses, but it takes care of the elimination of the toxins as they are set free, because the patient will consume a vast quantity of water and the toxins will be swept out of the system thereby. At the same time this treatment is being carried out, the patient should have a continuous vaginal douche, lasting for at least two hours, at a temperature of 115 degrees. If she is made comfortable while taking this douche, she may enjoy her midday nap at that time. The patient's condition will not remain the same, but she will grow progressively better.

DR. H. S. MCKAY, St. Louis: I agree with Dr. Potter that the ordinary icebag probably is not adequate and that several of them should be used, or, at least, one very large bag.



With respect to the Coffey quarantine pack, if I understood the doctor correctly, he objected to the use of gauze, but the quarantine pack of Coffey is intended to do away with the gauze coming in contact with the intestines. A number of gauze wicks are placed in and are surrounded by rubber tissue; that is, he has made several cigarette drains, then on either side of them has placed a piece of rubber sheeting. This prevents the intestines from coming in contact with the small cigarette drains of gauze and at the same time protects the pelvic organs.

The removal of the ovaries is one of the most serious problems with which the gynecologist is confronted, and I imagine that all men who do work of this type are going to have cases with these nervous phenomena present, following removal of both ovaries.

The great majority of pelvic infections are gonorrheal in origin, but I do not find the percentage as high as ninety-five. The majority of them will get well without any treatment except as outlined—that is, no operative treatment. Polak reports 104 cases treated as outlined, with 101 recoveries, and 36 of these became pregnant afterward. All cases were studied and observed after they had done well for a period of some two years. One hundred and sixty-eight cases came to him with sterility due to infections, gonorrheal or otherwise, and only twenty of these could be relieved by operative measures, thus showing that we get by far the better percentage of cures by the rest treatment.

#### TREATMENT OF DACRIOCYSTITIS IN INFANTS\*

JOHN GREEN, JR., M.D.  
ST. LOUIS

During the past ten years various agencies have been busy instructing the public and profession in the dangers of "Babies' Sore Eyes" and the means of prevention and cure. As a result, the incidence of ophthalmia neonatorum has somewhat lessened with a corresponding diminution in the number of children blind from this disease. The best results have been secured in states where the board of health distributes free ampoules of silver nitrate solution (for prophylaxis), and where well conceived laws requiring prompt reporting of eye infections in infants to recognized health authorities are in operation. Especially efficacious in arousing midwives and physicians to their duties in these cases are a few successful prosecutions of violators of the ophthalmia neonatorum law. The newborn babe has therefore a better chance to escape the perils of a specific ophthalmia than ever before. And we may hope that eventually this wholly unnecessary cause of blindness will be eliminated.

The emphasis which has been laid on the dangers of specific ophthalmia has led practitioners to view with suspicion every purulent discharge from the eyes of young infants—has, indeed, led to the assumption, in the minds

of some, that every purulent discharge from a baby's eyes is a genuine ophthalmia. This, of course, is an extreme view, as we know that many babies in the early weeks of life have a mild conjunctivitis which runs much the same course as catarrhal conjunctivitis in the adult, and gets well with little or no treatment. But it is vastly safer to assume that every conjunctival discharge in the newborn is dangerous until it is proved harmless, than *vice versa*.

There is another infection which is not primarily a conjunctival infection at all, but which is often mistaken for an ophthalmia—viz., infantile dacriocystitis. In the earliest stages of this trouble there is no inflammation either of the tear sac or of the conjunctiva, and no involvement of the cornea, but merely an overflow of tears. I presume every one has occasionally seen a "weepy eyed" infant. Almost always only one eye is involved. The diagnosis is readily established by pressure over the site of the lacrimal sac (using the tip of the little finger), when a clear viscid fluid will emerge from the puncta. This pre-inflammatory stage lasts for a variable period. Sooner or later the retained contents of the sac becomes infected, and a low grade inflammation supervenes. The development of a true dacriocystitis does not change essentially the clinical picture—there is still the "weepy eye" without signs of conjunctival or corneal inflammation. A single drop of pus may often be seen covering the caruncle and when pressure is made over the sac the expressed material is distinctly purulent. In view of the ease with which the diagnosis can be made, it is surprising how often it is missed. Sometimes weeks and months of treatment directed against a suppurative conjunctivitis are given before the true condition is recognized. In this connection it should not be forgotten that often there is no swelling at the site of the sac and hence firm pressure backward and inward may be required to express the contents.

What is the anatomical condition underlying this "weepy eye"? Let us recall for a moment the development of the lacrimo-nasal canal, well described by Zentmayer<sup>1</sup> as follows: "In the young fetus there exists a groove between the external nasal, the fronto-nasal and the maxillary processes, extending from the eye to the outer border of the nasal opening. The nasal duct arises as a thickening of the epidermis along the line of the lacrimo-nasal groove. This forms a solid ridge, which separates, except at each end, and forms a solid cord (Ryder). This cord becomes converted into a canal by a separation of the epithelial cells. The resulting debris, up until the seventh month or later, fills the canal with a gelatinous mass."

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

1. Zentmayer: Trans. Sec. on Ophthalmology A. M. A., 1908, p. 396.

It is obvious that if the septum between the duct and the nasal chamber remains imperforate, the separated epithelial cells will continue to occupy the lumen of the duct, and drainage into the nose will be impossible. According to Parsons,<sup>2</sup> this was observed anatomically in fetuses and newborn children by Bochdalek<sup>3</sup> as early as 1866. Cirincione<sup>4</sup> and Peters<sup>5</sup> also demonstrated the presence of an epithelial mass at the lower end of the duct. This condition has been regarded as merely a retardation in the development of the duct (Jackson<sup>6</sup>). Zentmayer alludes to other possible causes of obstruction, most of them supposititious. It is not unlikely that annular folds of mucosa within the duct and the pressure of an inferior turbinate may, rarely, by inhibiting drainage, give rise to this condition. Primary dacriocystitis, i. e., not secondary to mechanical obstruction, has been observed in syphilitic babies. On this point my personal experience is negative — and I have had opportunity to observe the ocular complications of a large number of syphilitic babies in the St. Louis Children's Hospital and in Washington University Dispensary. That hereditary syphilis may play an important rôle in dacriocystitis in older children is indicated by Igersheimer,<sup>7</sup> who reports twenty cases of dacriostenosis and dacriocysto-bleorrhoea in children from 2 to 14, all giving strongly positive Wassermanns. Butler<sup>8</sup> avers that in older children tuberculosis of the lacrimal sac is a fairly common condition. I cannot confirm this observation from my own experience.

We may take for granted then, that in the great majority of cases infantile dacriocystitis is a result of the blockage of the lower end of the bony duct by fetal remains. What, then, is the rational treatment? We may assume, with Jackson, that the condition is one of delayed development, and, while temporizing with such measures as expression of the sac contents and cleansing douches, await the post-natal development of the duct. When this has been accomplished it is to be expected that the occlusive mass will separate and the patency of the duct will be restored. That such a process actually does take place in some instances is evident from the occasional recovery under the treatment outlined above, or even in the absence of all treatment. Some authors insist that the effort be made, by pressure backward, inward and downward, to force the contents of the sac down into the duct in the expectation that the fluid pressure thus exerted will force the plug into the nose. A similar argument is used by

those who advocate and practice the introduction of fluid under pressure into the sac. The objection that I see to this method is that we do not know how much pressure the delicate sac of an infant will stand without rupture — and, moreover, we are dealing with a sac the walls of which have been weakened by inflammation and distention.

Such methods may be tried for a short time, but I should certainly not pursue them beyond a few weeks. If they are not successful within a few weeks, they are very likely not to be successful in months of treatment. Some ophthalmologists seem to possess a blind faith that sooner or later their tri-weekly round of massage, lavage and syringing will be rewarded by a cure. They may possess the patience of Job, but the mother does not, and her original faith is apt to be shattered when, month after month passes without improvement in her baby's condition.

What then, should we do? It seems to me that, knowing the pathology, the answer is very simple. If we are dealing with a hypodermic needle that has become blocked with dirt, cotton, or dried blood, we push the plug out of the way with a fine wire. Why should we not do the same with the plug in the baby's lacrimal duct? The last generation of ophthalmic teachers insisted that the infant's lacrimal duct was forbidden surgical ground; that in infantile dacriocystitis one's therapeutic efforts should not go beyond massage, lavage and syringing. Recent writers express different views, for I find that most of those who have written on this subject in the past ten years advocate probing as an early measure. It has seemed to me that to probe an infant's duct, to press through a loosely-fitting plug of epithelial debris, is much more rational than to force a passage through an adult's duct narrowed through the contraction of scar tissue. In the one case we establish a normally functioning duct; in the other we traumatize a diseased mucous membrane and submucosa, thereby giving rise to an inflammatory reaction which tends to create more and more cicatricial tissue.

Let us not forget that the bones forming a baby's lacrimal passage are thin and delicate. It is very important, therefore, to avoid making pressure against the bones surrounding the sac and, after the probe has been brought to a vertical position to make very sure that it has entered the bony duct, before advancing it toward the nostril. Once the probe is properly entered it is surprising how little force is required to advance it to the bottom of the duct. The tactile sensation may be compared to the feeling of slight but smooth resistance encountered in passing a rubber catheter. Of course, it goes without saying that one who probes an infant's duct should have acquired the neces-

2. Parsons: *Pathology of the Eye*, 111, 906.

3. Bochdalek: *Prager Viertel Jahresschrift*.

4. Cirincione: *Lavori della Clin. Oc. di Napoli*, 4, 1895.

5. Peters: *Klin. Monatsbl. f. Augenheilk.*, 29, 1891.

6. Jackson: *Ophthalmic Record*, July, 1907.

7. Igersheimer: *Klin. Monatsbl. f. Augenheilk.*, 52, 312.

8. Butler: *Brit. Med. Jour.*, Nov. 1, 1913, p. 1144.



sary skill by frequent experience with the method in adults. Therefore no one but an ophthalmic surgeon should attempt to do this work. Usually a single probing suffices, for once rid of the fetal debris the lumen remains patent.

It has recently occurred to me that there would be certain advantages in substituting a slightly flexible probe for the rigid silver one. We do not propose to create a new passage by force, but to press out foreign material from a natural passage. Therefore a probe that, through its flexibility, will worm its way along the tube should, theoretically, be ideal, and should traumatize the tissue scarcely at all. I have found that a small olive-tipped filiform bougie is a satisfactory instrument for this purpose.

From the cases of congenital dacriocystitis treated during the past five years I have selected the following as showing what one may reasonably expect from probing:

Baby J. L. B., male, age 3 months, was brought to me Sept. 29, 1915. Shortly after birth, the right eye was observed to be watery. The obstetrician's attention was called to the condition but he "did not find any inflammation" and said the trouble would soon pass away. The baby was taken north for the summer and the watering continued. There was also some purulent discharge. A general practitioner prescribed boric acid and silver nitrate. No improvement.

Pressure over the right sac expressed mucopus. Slightly dilated right lower punctum and passed Bowman 3 to nostril. Baby seen ten days later, entirely well. Nov. 9th, baby continues well.

R. A. M., age 3½ months. Seen Jan. 22, 1917. Right eye has been "pussey" since birth. Boric acid wash failed to relieve. Right, purulent discharge on pressure over sac. Passed Bowman 1 to nostril after dilating punctum. Jan. 23, 1917, pressure over sac causes slight discharge from puncta. Ordered mother to press over sac twice daily. January 29th: Mother declares she has been unable to express any pus and that the eye no longer waters. Feb. 15, 1917, eye has remained perfectly well.

M. V., age 5 months. Seen Jan. 30, 1917. At birth left eye was observed to be "pussey." Referred by obstetrician to oculist, who had patient brought to office three times a week, "pressed out matter, and gave brown drops and wash to use." No improvement. Recently the oculist proposed to give "internal treatment" to dissolve the stricture.

Finally the mother lost confidence and sought other advice. Passed Bowman 2 through upper punctum to nostril—no resistance and no bleeding. Three days later the mother declared the eye was "just like the other," she "could hardly believe it." No pus and no stilloidum. Two weeks later, reported that the baby's eye continues perfectly well.

A number of authors advise that the probing be done under general anesthesia. This seems to me wholly unnecessary. If after cocainization of the sac the child be placed on the table, its head firmly held by the nurse, and its arms and legs controlled by another attendant, the little one can be kept still enough for the necessary manipulation.

626 Metropolitan Building.

#### DISCUSSION

DR. R. J. CURDY, Kansas City: The difference of opinion in regard to the treatment of these cases is whether immediate drainage should be brought about by operative measures or expectant treatment followed, allowing time for the opening of the duct to be brought about by Nature. In acute cases, the cases of lachrymal abscess with marked inflammation and distention of the sac with pus, there is no difference of opinion. In this condition, immediate drainage and evacuation of the pus must be brought about, and can best be accomplished by incision through the skin. At the same time, the duct should be opened into the nostril by means of a probe. It will then more probably remain open than if the probing is done without the preliminary incision through the skin, which evacuates the pus and relieves the tension and swelling of the acute inflammation. The normally functioning ducts which result from this treatment prove that the probing can be done without real damage to the duct.

In the mild cases, which alone have been considered by Dr. Green, in which there is little evidence of inflammation, the retained fluid consisting mostly of mucus with a little admixture of pus, the expectant treatment is often perfectly successful. After the lapse of more or less time, the opening is brought about by Nature and perfectly normal conditions result. The objections to this treatment are the time required, often many months, and the constant menace to the eye from the continual presence of the infected fluid. An injury to the cornea, even though slight can hardly escape infection. That this is a real menace must be admitted. When it is remembered that among bacteria found in the fluid are the gonococcus, the pneumococcus, the streptococcus, and the staphylococcus aureus, all of them most virulent if the cornea becomes infected with them.

The objections made to probing the duct are based on the ground that anatomical changes may be produced which prevent the normal development of the duct or prevent its development so that it can function normally. This is doubtless true if a large probe is used. It is to be remembered that these are not cases of stricture requiring dilatation, but cases of delayed opening of the duct, usually only of the lower end. A mere perforation suffices for the immediate need of drainage and will develop of itself into the normal caliber. My preference is for a silver probe with an olive-shaped point, the greatest thickness of the olive point being about one millimeter. That is about the size of a Bowman No. 4 probe. Smaller probes are objectionable in that there is danger of making a false passage, and this sized probe can be passed through the canaliculus without stretching it.

I would also hesitate to use the flexible probe of the small size mentioned by Dr. Green for the same reason, the danger of making a false passage. It seems to me more important to have control of the tip of the probe than to have flexibility. I would also hesitate to use a fluid from a syringe, under sufficient force to accomplish anything, in the duct; there is lack of control of the force, the force is expansive in all directions, and if sufficient to open the duct other damage may be done.

It is desirable that in all operative measures undertaken as little damage be done to the normal portion of the duct as possible, and that can be managed by the probe I have mentioned, which attacks only the small portion of the duct.

DR. JOHN GREEN, JR., St. Louis, closing: I entirely agree with Dr. Curdy's views as to the management of those acute cases in which marked inflammatory signs, with purulent discharge, are present. Under these circumstances one has no choice. It is necessary to evacuate the pus by skin incision. Then subse-

quent probing will reestablish the lumen and drainage will take place through the natural passage.

It seems to me that the time element is one that ought to be considered in the conservative management of these cases. Perhaps "expectant" is a better term to use than "conservative." Expectant treatment should not be extended beyond a few weeks. To subject a baby to a prolonged course, when almost certainly the introduction of a probe will effect an immediate and permanent cure, is, in my opinion, not good practice. Dr. Curdy has brought out the point that the presence of purulent material in the sac is a constant menace to the eye. We know how frequently babies scratch their mother's eyes, and, indeed, their own eyes, with their fingernails. Such an abrasion could readily become infected from a purulent sac, leading to the development of a most serious ulcer.

I feel that Dr. Curdy might sometimes succeed with a probe smaller than a No. 4 Bowman, whereas with a No. 4 he might not succeed. I do not quite agree with him that a probe smaller than a No. 4 Bowman is likely to create a false passage. I do not think it will, provided one does not use any more force in introducing the probe than one would use in introducing a rubber catheter. All of this work has to be done delicately, carefully; if you meet an obstruction of any sort, stop, withdraw your probe a little and make another introduction.

Unfortunately, I have not had a chance to use the flexible bougie in a case of dacriocystitis, but I have tried it on a baby's cadaver, and it passes very readily. I fancy that in dacriocystitis with a real obstruction from the occlusive mass it will work equally as well.

#### THE NEED FOR MORE THOROUGH EXAMINATION INTO THE FAMILY HISTORY AND MORE EXHAUSTIVE SEARCH FOR DISEASE IN APPLICANTS FOR ADMISSION TO SCHOOLS FOR THE BLIND

J. W. CHARLES, M.D.  
AND  
HARVEY D. LAMB, M.D.  
ST. LOUIS

Through the kindness of Dr. Jeans of the St. Louis Children's Hospital, we have been enabled to obtain Wassermanns in about three-quarters of the pupils of the Missouri School for the Blind. Since the school is a part of the educational system of the state the permission of the pupils must be obtained, and therefore many of the older pupils refused to aid us in our search for something which might contribute to our knowledge of eye diseases. In order to obtain as large a series as possible we have written to the heads of all the institutions for the blind in all the states, hoping to make a classification of the various conditions causing blindness, in order to see if syphilis causes as much blindness as was formerly supposed; at the same time being on the lookout for a deleterious influence of the spirochetes in the cases of those diseases which are not caused directly by lues. Out of 106 pupils in the school seventy-nine gave their consent. As a beginning attempt at classification we have endeavored to establish whether

the pupils became blind in the country, a small town, or in the more congested centers of population where one would expect crowding, dirt and want of proper nourishment.

We believe that if the plan of taking Wassermanns on new pupils is once inaugurated at the beginning of the school-year, it will come to be accepted as a matter of fact and a collection of valuable statistics will follow. As far as its feasibility is concerned, it seems to us as necessary for the protection of the patient as vaccination against smallpox or typhoid. An example of this fact was manifested in the case of a boy with optic atrophy who refused a blood test on the ground that "If you cannot promise me any improvement from it I do not want it." He had been admitted to the school in 1910 at 15 years of age, after having had resection of the inferior maxilla. In November, 1916, his cornea showed a large amount of interstitial infiltration with numerous deep vessels and edema of the epithelium over the affected area. A Wassermann test was recommended and refused. In January, 1917, there appeared an osteomyelitis of the inferior maxilla and the patient was sent to the City Hospital where a + + + + was found and treatment instituted. We have heard that he has again ceased treatment and our feeling is that if a Wassermann had been required when he entered in 1910 he perhaps would have been a more tractable patient and therefore a much happier boy. The question also remains unanswered, how much of a menace to others such a case may be.

Another case was that of an older girl who had a hideous family history and ophthalmia neonatorum. She had been placed in the school by one of the social service societies and for years no one thought of the possibility that her great nervousness and general "crankiness" might have a reason other than "hereditary cussedness" or flightiness. She also gave a + + + +.

Concerning the more careful investigation by the physician, we make the appeal to the profession for a rather extensive account of the family history of general diseases, as well as ocular troubles, preferably giving the names of those in the family to whom letters of inquiry may be addressed, and also as far as possible checking up loose statements instead of filling out our blanks unchallenged.

An example of the latter mistake is that of "age when patient became blind." We have had ophthalmia neonatorum which was said to have caused blindness at 16 months; this may have been the earliest time in which the parents discovered the blindness after an actual ophthalmia neonatorum, but may have been just the loose statement of careless parents.

We frequently have borderline cases of corneal cicatrization which are so undefined that only the history of the case enables us to decide



what manner of corneal disease was the cause, and that is frequently too vague for diagnosis. Hence the "other causes" column in our classifications.

If, in each state, each consultant of the School for the Blind and each superintendent will work with the physicians and parents for more information, something will eventually be found of benefit to pupils as well as outside patients in the way of advancing the knowledge of the profession concerning diseases which cause blindness.

We consider that we have been fortunate in obtaining these blood tests from Washington University through Dr. Jeans and congratulate ourselves on the spirit shown to aid us in scientific work. Among the letters received in answer to our request for the taking of Wassermanns there were some which expressed the fear of its high cost. It seems to us that for this high purpose some one might be found who would be willing to make these tests on the indigent pupils free, and at a nominal price on those whose parents are unwilling to pay; and an appeal might be made to those parents who can afford the small expense on the ground of safety to their children. Some way can be found to handle most people if the will is there to accomplish the best results possible. As a rule, the belief that a certain course is necessary is all that is needed for accomplishment.

We would suggest to superintendents and medical consultants of our schools to begin a classification of pupils by diseases, with a card index for each disease, with columns for (1) rural or urban; (2) age; (3) became blind; (4) vision; (5) Wassermann; (6) a column for stigmata of disease, (7) space for remarks. This is a rather easy way to begin statistics and other columns may later be added. The whole idea of greater perfection in making examinations as well as histories and statistics can be most easily followed when the new pupils are first entered as a part of the entrance routine.

In some of the letters which we have received from the superintendents of the schools for the blind, we have noted that "We have no regularly employed oculist, only a physician" to attend the pupils. We would respectfully suggest that much more efficient work can be done by good team work between a general physician, a specialist in surgery, an ophthalmologist and a progressive, enthusiastic, reliable laboratory man, who is also an altruist, than can ever be accomplished by one physician alone. Even diagnosis can best be confirmed by an ophthalmologist, and such positions need not pay a salary because most younger men would be glad to see once a week the unusual cases which terminate in a school for the blind. The work for an ophthalmologist is not very onerous although to be done properly one afternoon a week must be devoted to it.

The physician, surgeon and dentist in the Missouri School for the Blind receive compensation for the work which they do. The ophthalmologist receives only the salary of a member of the board of managers with the customary fine when absent from a meeting of the board. This plan has worked well for twenty-five years because our school is located in a city where clinics and hospitals are convenient, and patients can be referred for more accurate examination.

We have also discovered that many schools send pupils for Wassermanns to a hospital and the physician in charge, obtaining a report, makes a mental note of it and never records it on the history of the patient so that the test becomes valueless for purposes of statistics and also to the successor of the consultant.

Below will be found a copy of the entrance blank:

#### APPLICATION FOR ADMISSION

*Please answer Questions fully and correctly and return to Superintendent.*

1. Name and age of applicant.....
2. Where was he, or she, born? .....
3. Was he or she born blind? If not, at what age was the sight impaired? .....
4. Is the blindness partial or total?.....
5. What was the real or supposed cause of the loss of sight? .....
6. Have the eyes ever received medical treatment, and, if so, by whom treated? .....
7. Has he, or she, ever been subject to fits, neuralgia, syphilis, scrofula, rheumatism or gout?.....
8. Is he, or she, now in good health and free from eruptions and contagious diseases of the skin and other constitutional diseases? .....
9. Is the blindness accompanied by any other physical deformity? .....
10. Is he, or she, of sound mind, active and industrious, and susceptible of moral and intellectual culture? .....
11. Is he addicted to the use of liquor or of tobacco in any form? .....
12. Has he, or she, been a pupil in any similar institution, and, if so, what one and for how long? .....
13. Has he, or she, been vaccinated?.....
14. Were the parents related before marriage? .....
15. Were or are the parents temperate, healthy, and not given to the use of tobacco? .....
16. Were or are any of the relatives blind, deaf and dumb, insane or afflicted with any infirmity of body, especially syphilis, scrofula or cancerous diseases? .....
17. If an adult, state previous occupation, and if he is of good morals and physically able to follow some trade? .....
18. What church shall he, or she, attend? .....
19. Name and Post Office address of parents, guardians or other friends? .....
20. Nearest point of communication, and by what public conveyance? .....

Certificate to be signed by a physician in good standing:

I HEREBY CERTIFY, That the above applicant, ..... has not sufficient vision to be educated in the other public schools; is free from epilepsy and from any contagious diseases, and is a proper person to be received by and educated in the Institution for the Blind.

Certificate to be signed by the Parents, Guardian, or Judge of the County Court:

WE HEREBY AGREE, To furnish necessary clothing, pay traveling expenses, provide a home during vacations, and remove, without expense to the Institution, the above applicant, ..... whenever so requested by the Board of Managers.

..... Parent  
 ..... Guardian  
 ..... Judge of Co. Court.

Dated..... Entered.....

## PHYSIOLOGIC THERAPEUTICS\*

A. C. AMES, M.D.  
MOUNTAIN GROVE, MO.

By physiologic therapeutics is meant methods of treatment that operate in harmony with the natural physiologic processes and assist them in doing their work. All disease may be said to be a condition brought about by the failure of the natural physiologic processes of the body to do their work, either by some hindrance to the same, or by some unnatural or excessive burden that is placed on them, or both.

The rational application of physiologic therapeutics must presuppose an intelligent understanding of the natural physiologic processes of the body, and also of the deviations therefrom in diseased conditions.

No doubt every method of treatment that has ever been used or proposed has aimed at the one thing—assisting nature—but we know that many of them have fallen far short of that object, and often have even had an exactly contrary effect, just from a failure to understand what the natural physiologic processes of the body were attempting to do and how they were attempting to do it, and from a wrong conception of the effect on the same of the means applied, as well as from a wrong conception of the nature of the disease itself.

It was formerly supposed that disease consisted of a possession by an evil spirit which must be cast out by some means, hence charms and incantations were depended on, and such views are still held in some countries, and they are not altogether lacking even in civilized lands. A missionary in China tells of seeing a crowd around a house beating tin pans and making all kinds of noises, and waving red flags over the chimney, to drive out the evil spirit, and on going inside of finding a man dying with typhoid fever with no one even to give him a drink of water—much less a bath to cool his fever. In our own country at not a very distant day thousands have likewise died of the same disease from lack of the same physiologic therapeutics, but instead of the noise and excitement to help wear them out, they had all sorts of noxious substances poured into their bodies in the name of medicine, to add to the burdens already overcoming the natural physiologic processes of their eliminating organs, instead of having baths to cool the fever and water to drink to dilute and flush out of the system the poisons caused by the typhoid bacilli responsible for the symptoms.

In Korea at the present time a recognized means of driving out the evil spirits to which they attribute all diseases is to thrust long

needles of various sizes and degrees of uncleanness into the tissues of the part affected, in hopes of making it so uncomfortable for the satanic emissary that he will be glad to vacate his abode, but we can understand that such treatment can accomplish nothing but to add to the suffering of the patient and to the infectious germs the body must destroy and to the structural damages that must be repaired.

There are many in our country today who rejoice to see a rheumatic pain in the body shift to a limb, and who hope to drive it out of the end of an extremity by rubbing in that direction, and by other means, when a more enlightened understanding realizes that it is caused by an accumulation in the blood and tissues of broken-down material and waste matter from the failure of proper elimination. And as there are no eliminating organs of any extent in the extremities the "evil spirit" cannot be driven out that way, while rubbing of the limbs toward the body, together with general massage, is very effective in improving the circulation and hastening the offending substances to the eliminating organs and from thence out of the system.

A more modern conception of disease than that of satanic possession was that it was caused by humors in the blood, which was not altogether wrong, but the means employed were not in harmony with the physiologic processes altogether. These means consisted of bleeding, which was just as effective for destroying the beneficial elements of the blood as for getting rid of the harmful ones; purging and vomiting, which did the same for the contents of the alimentary canal; seatons which did very little but add a new infection and suffering for the patient; blisters, which were but little better, and a few other similar measures. Sometimes no doubt such means may be properly used, but not to the extent they have been in the past.

As it began to be realized that disease was a derangement of the vital functions of the various organs, and the physiologic effects of different drugs began to be understood better, the object striven for was to use a drug whose effect would be to increase the action of the various organs which were supposed not to be doing their full duty. As a result, often a hard worked and perfectly innocent organ was whipped up and abused by more or less poisonous drugs which really added to its burdens or to those of other organs, instead of an effort being made to relieve it of the unnecessary burdens that had been heaped on it by wrong diet or other habits affecting life. This method of treating disease is altogether too common among us at the present day. When a patient comes to us he thinks he must have medicine and will not often be put off with advice as to his mode of life instead, and we have to give it to him or he will go to some one else who will, but if we

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.



are honest and efficient we will give him medicine that will not harm him by adding unnecessary burdens to his overworked organs, even if it can do little or no good, and then at the same time give him the advice that he needs also, and try to impress on him its importance as much as possible.

When it became known that many diseases were caused by micro-organisms, the search for methods of killing them was the natural results, but so far we have not been able to accomplish very much in this direction. We know that quinin will kill the malarial parasite; iodine, mercury and arsenic will kill the spirochete of syphilis; emetin will kill the protozoa of dysentery and pyorrhea, but beyond this we have not been able to do very much by drugs in the way of directly killing the disease germs by internal medication. In surgery we have been able to accomplish more by antiseptics to kill the germs in the wounds, and more yet by asepsis to keep them out in the first place, and this is one of the highest order of physiologic therapeutic means. In the vast majority of cases we must depend on the natural processes of the body, the *vis medicatrix naturae*, to produce their own substances to kill the invading hosts of micro-organisms. This we have been able to assist to some extent recently by producing such substances outside of the body in the way of serums and vaccines, which, when properly prepared and used may claim a place in physiologic therapeutics.

As these facts are becoming better known many drugs that have long been used, and to which great virtues have been attributed, are being found to be worthless and are being abandoned to go the way of the madstone, the rabbit's foot, and other superstitions, while other more rational means are taking their places.

But we must not go to the extreme of thinking that all diseases are due to germs, for many are due to a lack of the necessary materials to repair the wastes of the body and a failure to remove the wastes that are produced. This latter is most often caused by an improper action of the circulatory system.

In order to supply the proper materials for the body the subject of diet must be studied and the errors rectified, but proper food is not all that is needed, for pure air and water are even more important. Iron, and a very few other drugs, can claim a place in physiologic therapeutics by reason of supplying materials to repair wastes, or to act as foods as it were, but even these few can be dispensed with if the proper foods can be supplied.

In the matter of eliminating wastes we find the greatest chance to exercise our knowledge of physiologic therapeutics in the way of proper exercise, proper adjustment of the clothing, and

proper use of heat and cold, especially by means of hot and cold baths, massage, etc.

Many diseases are caused by, or accompanied with, an improper adjustment of the circulation the causes of which we are not always able to determine, but which by proper means we can do much to rectify. A local application of heat will dilate the blood vessels in a part and increase the flow of blood to it and thus relieve a congestion in another part. Thus a hot foot-bath will do much to relieve a congestion of the lungs. A heating compress over the abdomen will increase the blood supply in the organs contained therein and benefit some forms of torpidity, or lack of proper action, and at the same time it will relieve congestion of the brain and promote sleep. Heat over the abdominal and thoracic regions not only dilates the vessels in the part affected, that is, the skin and superficial muscles, but also the parts supplied by nerves originating in the same part of the spinal cord as those supplying the part to which the heat is applied. This is usually the organ directly under this part of the surface. The vessels in a lung for instance will be dilated by heat applied to the skin over it, although the heat does not penetrate deeply enough to reach the lung itself.

A general cold bath is quite well recognized to have great tonic properties. Used too cold by one not accustomed to it and not able to react, it is capable of great harm, but to begin with a daily warm bath and gradually reduce the temperature from day to day as the system becomes capable of reacting to it, will wonderfully strengthen the resisting powers of the system and lessen the dangers from exposure as well as increase the strength of all the vital functions. Daily exposure of the naked body to cold air accompanied with brisk friction will have much the same beneficial effect. Such treatment serves as a gymnastic exercise as it were for the vasomotor nervous system and thus strengthens it and enables it to adjust itself to the many varying conditions which would cause disease if their effects could not be resisted.

A sluggish circulation in the lower limbs, whereby the waste matters are not carried away as fast as they are formed and new material is not brought in as fast as needed, is the main cause of the chronic ulcers so often seen on the ankles. In the treatment of such ulcers it is of course necessary to cover them with some protective covering to prevent injury and to use antiseptics to destroy the germs that get in from without, but as a rule this is not enough. It may place the parts in the most favorable condition to heal but it of itself can not grow new tissues to repair the break. This must be done by the physiologic processes of the part itself. If the circulation can be improved so the wastes can be carried away as fast as formed, and so new material can be brought in as fast as

needed, the ulcer will heal, but not otherwise. In one such case of several years' duration I advised the patient to take two buckets of water, one as hot as she could bear her foot in and kept hot by frequent additions of hot water, the other to be as cold as she could get it. Put the foot in the hot water two minutes, then in the cold water a half minute. Repeat five or six times and dry out of the cold water. The heat dilates the vessels, which will fill with blood. The cold contracts them and drives it onward. This acts on the circulation very much like the alternate compression and expansion of the bulb of a bulb syringe. More than that, it strengthens the vasomotor system and so keeps up a better circulation between treatments, which should be taken two or three times a day. The result in this case was a cure in a few weeks' time. I have advised this treatment often but usually the patient fails to carry it out and insists on a drug



that will grow new skin, when such a drug does not exist. If a drug could grow new skin it could grow it on a stick as well as on a leg. The only reason why it never does so, is that it is the leg that grows the skin and not the drug as many fondly imagine. All that medicine can do in such a case is to protect the sore from drying out, from germs, and from other injury, and in these actions it is in harmony with physiologic therapeutics and very useful.

In two other similar cases I used massage of the whole body, and especially of the leg affected, together with hot and cold water applied alternately as above described, but with a hose instead of by immersion. The result was the same. One of the cases (see illustration) had been treated eight months by as many different physicians and gradually grown worse, but was healed in as many weeks under this treatment with nothing but a protective anti-

septic dressing between the baths and a thorough cauterizing and cleansing to start with.

I have given a few cases and a few of the underlying principles merely as examples. There are so many of them that a thorough and complete discussion of them all would make a large volume, for in fact the human body is like a harp of a thousand strings. When all are in tune the music is perfect and there is health, but when part are out of tune there is discord, or disease. Happy is the man who is able to say where the trouble is and to correct it by natural means. What has been said about ulcers of the leg could be said about diseases in almost any part.

Now I do not want to be understood as advancing any new fad or condemning any recognized means of treatment, but merely to urge the importance of a more complete understanding of the natural physiologic processes of the body and a more thorough knowledge of the actions of the various therapeutic means, and then the use of the latter to assist the former, and not merely a blind use of drugs with the expectation of their having some mysterious effect on disease which will be beneficial. The use of drugs no doubt was originally entirely of that character, and some are still used that way by the best of us, merely because they have been proved to be beneficial. We have not yet emerged entirely from the mists of ignorance and superstition, but let us follow the light we have and still seek for more.

The human body is the most wonderful and intricate piece of mechanism in existence, and no doubt the most expert physiologist would not live very long if his body performed no functions except such as he fully understands, or if it really performed them as he supposes it does. It has been said that we take drugs of whose action we know little, and put them into bodies of which we know less, and expect them to cure diseases of which we know nothing. If it were not for the wonderful power that the body has to take care of itself, the result would be more disastrous than it is.

## PULMONARY TUBERCULOSIS\*

H. S. O'DONNELL  
ST. LOUIS

Pulmonary tuberculosis, while only one of many forms of tuberculous disease, is the most frequent manifestation of the activities of the tubercle bacillus in man. It is usually considered at the present time that the vast majority of the tuberculous infections are of the human type of bacilli, the bovine type being present at

\*By a medical student while working in the Tuberculosis Clinic of Washington University Medical School, June, 1917.



times in childhood, but its action being almost invariably limited to glands, bone, etc. That tuberculous infection occurs in childhood and that symptoms found in later life are but a manifestation of this primary infection in the presence of a lowered resistance of the human body is believed, but this probably does not hold in all cases. This primary infection whether it causes clinical evidence of tuberculosis or not, establishes an immunity which, with the formation of antibodies, protects the individual under ordinary conditions from secondary infection, which infection, however, may occur from the flareup of an old lesion or from a superimposed infection from without in some cases. There are a great many factors which may have influence in causing a lowered immunity or resistance, among them being malnutrition, overwork, exposure, disease, etc.

Tuberculosis is a toxemia, the local manifestations being conditions such as coagulation necrosis; the general, those symptoms which shall later be considered. Thus is it explained why a patient at rest gives fewer symptoms because the more active the lung the more toxins are liberated. Tuberculous infection and tuberculous disease should be distinguished. The former may be present and give no visible evidence, the latter being a clinical manifestation of the infection. Infection in a large percentage of cases is followed by no symptoms.

In the consideration of the diagnosis of the disease it is important to realize its seriousness and the value of an early diagnosis. Realizing these facts, the value of the use of all means at the human command is easily recognized. The patient wants to know whether or not he has tuberculosis. To answer this question a complete examination should be made, including a careful history, physical examination, and the various laboratory and scientific means at one's command. Even with all the methods at present in use, a positive diagnosis cannot be made in a great number of cases. It is in the early cases where the diagnosis is difficult, and it is these cases which offer the chance of cure, so it behooves the physician to overlook no points in his examination.

The following outline presents a good routine examination:

#### CHIEF COMPLAINT

*Family History.*—Tuberculosis in parents, relatives and associates.

*Past History.*—Lung infections, debilitating diseases.

*Present Illness.*—Cough, expectoration; fatigue, lassitude, tired; loss of weight; pain in chest, pleurisy, etc.; afternoon fever; hemoptysis; night sweats.

*Physical Examination.*—Inspection, palpation, percussion, auscultation, pulse, temperature record, weight record. X-ray plate and fluoroscopic. Laboratory: Sputum, tubercle bacilli and elastic tissue, tuberculin; complement fixation; urinalysis; blood count.

The history of the patient is to be minutely inquired into; the first knowledge to be gained being the patient's reasons for presenting himself for examination. In the family history the health or cause of death of the patient's parents and family should be determined as well as a history of close association (especially in childhood) with any person with an active tuberculosis. In the past history former diseases are to be inquired into in detail, as to their course and complications. Very often in infants and children the active disease is found to follow one of the common childhood diseases. In adults other diseases may be of importance. The occupation, habits of living and nourishment may have had some influence. The menstrual history of women is necessary, because often amenorrhea is found. The present illness should begin with a very careful inquiry into the beginning or the first symptoms noticed by the patient. Such symptoms as cough, expectoration, fatigue, lassitude, loss of weight and strength, afternoon fever, pains in the chest, pleurisy, hemoptysis, night sweats, etc., are to be investigated and carefully considered.

There is no symptom, nor any set of symptoms, which always usher in the disease. Any may be absent or any combination may be present. Cough is very commonly an early symptom, usually being of a more or less dry and hacking character at first, but becoming loose and more productive later in the disease. Often there will be found a history of repeated colds accompanied by cough. Early the expectoration is scanty, but later may become more profuse and a dark gray or greenish color. Cavity formation and bronchiectasis lead to a large amount of expectoration. In some cases, the fibroid type especially, there may be little expectoration. Fatigue, lassitude and loss of strength are very common symptoms of tuberculosis. The fever is an especially important symptom, especially if of the afternoon variety, or if it occurs after exertion or exercise. In a great many cases night sweats may occur rather early, but are apt to be more profuse in the later stages. The time of occurrence is usually in the second half of the night. At times in early cases hemoptysis may be an early symptom, being usually in these cases of rather small amount. It is important to be sure that the blood is not derived from some part of the mouth, nose or throat. In later stages large hemorrhages may occur. Pains in the chest are often found to be present. Fluctuations in the weight curve and the reasons for them should be determined as well as possible. It must be remembered that no sign or symptom is pathognomonic of pulmonary tuberculosis. There may also be a wide divergence between the symptoms and the extent of the physical involvement, the sickness depending on the

amount of toxemia and not the extent of the lesion.

In the physical examination of a patient suspected of having tuberculosis, not only should the chest be examined, but also the whole body should be gone over carefully as there may be found in other parts of the body signs suggestive of tuberculosis. Emaciation, anemia, abnormal postures, etc., should be noted. On inspection of the chest, the position of the shoulders, clavicles and scapulae should be observed. Depressed supraclavicular and infraclavicular spaces are important. The chest should be watched during moderate inspiration for evidence of lagging, which is common on the diseased side. Asymmetry of the two sides may be of importance.

Palpation may also give evidence of lagging or decreased excursion. It is important in palpating to examine for muscle spasm or wasting. The inflammatory process in the lung may cause a spasticity of the muscles above, the condition being that of a protective spasm as is found in tra-abdominal conditions. After a period time the muscle worn out by this continued spasticity may become degenerated and be found smaller, looser and softer. Palpation for spasticity is best done with the finger tips applied lightly. The fingers may be drawn over the muscles, the spastic muscles offering more resistance than normally. The tendinous muscles of the neck may be stretched tightly. The palpation of the vocal fremitus is of little value in tuberculosis except in cases of effusion.

In order that one may intelligently interpret the findings obtained in percussion and auscultation of the chest, he should have an understanding of the physical fundamentals on which these phenomena depend. The chest should, therefore, be studied from the standpoint of physics, and in this connection we are concerned with the physics of sound. Sound is merely a manifestation of the effects of vibrations upon our auditory mechanism. The vibrating body sets into vibration waves of ether which act upon the sensory endorgans of the ear. The vibrations spread in every direction from the source and transmit the vibrations to objects with which they come in contact. These vibrations are influenced by the density of the media through which they travel. Sound cannot be present without vibrations. The normal chest is an air-containing body. The chest wall may be considered as a solid medium, the bronchi and lungs as air containing vessels. On percussion the chest wall is first set into vibration and secondarily the underlying tissues and air. The percussion note depends on the amount of air present in the lung. It is only by experience that the recognition of the normal resonance can be

obtained. Any infiltration, consolidation or substance which serves to increase the density causes a shorter note which varies according to the density. An increased amount of air results in a hyperresonant note. Thus it may be understood that the percussion note is merely an expression of density and differs with the amount of air present. The air in the lung and all the tissues about it are set into vibration by the acts of breathing and speaking, and these vibrations may be transmitted to our ears by the use of a stethoscope, which serves to collect the vibrations so that more may reach the ear. When we listen to the chest we hear only vibrations. The amount of vibrations carried from the interior of the lung to the stethoscope depends on the amount of air carried into the alveoli and also upon the factors causing diffusion, reflection, absorption, etc. We must think of how much air is going into the alveoli because resonance and breath sounds both vary according to the amount. In the whispered voice the air in the tubes is set into vibrations which are transmitted to the walls of the tubes and then on out. A thickening of the tubes will cause an increase in the whispered voice, because of the fact that diffusion is lessened.

In a consolidated lung reflection and diffusion are both lessened and thus an increase obtained. In percussion, therefore, the chest should be percussed out thoroughly but remembering the significance of changes in the note. Dulness over the clavicles or apices is important especially. Flatness over the bases suggests fluid. Posteriorly it is better to percuss from below upward. Comparison is made between the two sides and attention paid to whether or not the patient breathes deeply. Hyperresonance may be found as a compensatory effort, or in idiopathic emphysema, or also in a pneumothorax.

Early, the breath sounds may be decreased, due to less air being taken in, or the tissues may be soft, giving poor conduction in acute cases. The breath sounds may be found to be harsh, as is commonly the case when the patient comes under examination. Over the lung not affected we often find increased breath sounds, due to a compensatory effort, and indicating that more air is coming into the lung. Increased whisper is an indication of better sound conduction and may be found in infiltration, consolidation, compression, or even congestion. Decreased whisper is found in emphysema, bronchial occlusions, thickened pleura or pleural effusion. Over air-filled cavities the whispered sound may have an amphoric or echoing character. Bronchial breathing is heard over consolidations where the sound is conducted directly from the larger tubes.



Râles may be heard over the area involved. Early, they are of the type termed crepitant and subcrepitant and are an indication of the alveolar walls stuck together being torn apart by the incoming air. Later, the râles may be of a moist character, due to fluid secretions in the bronchi.

In recent years the Roentgen ray has come to play an important part in the diagnosis of tuberculosis and examination without its use is not today considered complete. The more common methods of physical examination may give evidence of consolidation or other pathologic changes, but there are some points which may be overlooked and yet found with the Roentgen ray. The Roentgen ray also serves as a check on the physical examination; not supplanting it, but serving as a valuable aid. In this case we deal with the physics of light as we deal with the physics of sound in percussion and auscultation. The rays when passing through the thorax are obstructed by the tissues according to their density, with the result that the denser the tissue the less light gets through and more of a shadow is cast. In the study of a plate, first the air content as a whole should be noted. The two sides should each be gone over carefully. Shadows which may be indicative of infiltrations and consolidations should be looked for. Thickening of the tubes, thickening and approximation of the interlobular lines are important. Roughening of the surface of the diaphragm, obliteration of the costophrenic angle or raised position of the diaphragm should be looked for. In most cases enlarged glands at the hilus are found giving a broadened mediastinal shadow. At times in cases which give slight or no evidence of percussion, signs may be found by the Roentgen ray of rather considerable extent due to the fact that the patient was breathing well and a considerable amount of air was present. By the fluoroscopic examination we can observe the lung in action. The lighting up of the apices is important. The same things should be noted here as in the Roentgen ray plate. Cavities and fluid may be located by the Roentgen ray, the fluid casting a dense shadow.

The finding of the tubercle bacillus in the sputum is a positive indication of tuberculosis. However, a negative result does not mean that tuberculosis is absent. A great many examinations may be necessary before the bacillus is found. The severity of the disease cannot be gauged by the number of bacilli found. The presence of elastic tissue is usually regarded as significant of a breaking down of the tissues.

The complement fixation test, while still in the experimental stage, and which cannot be relied on, as yet, as a positive indication, promises, in the light of present results, to be of great aid in the diagnosis. A point of much

importance in this test is the fact that it promises to give a means of diagnosis in those early cases where a diagnosis means so much to the patient. The test follows the Wassermann reaction in its technic except for the fact that the antigen is prepared directly from the bacillus itself. It is based on the fact that antibodies are present in the blood of the infected person.

The various tuberculin reactions are of relatively little value in adults, but are more important in infants and children. A negative result is of value, but a positive does not distinguish a latent from an active lesion. The urine analysis and blood count, though important, render little diagnostically.

It must be remembered that in a large number of cases it is a combination of all these examinations which gives the diagnosis. The more advanced cases are more easily determined, but in them the prognosis is bad. In a paper of this length it is impossible to consider all of the degrees and variations of tuberculosis and for this reason this is concerned more with the early cases.

Barnes Hospital.

---

#### FALLACY OF CHIROPRACTIC CLAIMS\*

JOHN D. SEBA, M.D.  
BLAND, MO.

In discussing the fallacies of many of the claims of the chiropractors it is not my aim to impugn to them any dishonest motives, but to take the most charitable view of the situation and make myself and others believe that most of their claims are due to a lack of education or rather false education. They proceed on the claim that 90 per cent. of all diseases to which human flesh is heir are due to an impingement of a spinal nerve in passing through the foramen in the spinal vertebra. It is the falsity of this theory we wish to expose.

The medical profession, on the other hand, proclaims that at least 90 per cent. of all diseases are due to infection and that the so-called impingement of the spinal nerve is not a causative factor in those infectious diseases.

It is argued by some laymen who have a superficial knowledge of the cause of disease, that certain diseases of the back might receive some benefit by chiropractors, especially the condition generally referred to as lumbago. But a scientific investigation of lumbago reveals the facts that the disease is due to uric acid poison which inflames the sheaths of the muscles and that the pain in lumbago is due to the gliding of these inflamed surfaces over one another;

---

\*Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, May 14-16, 1917.

that the proper treatment of this condition is first to eliminate the uric acid from the body and to prevent its future accumulation and that the so-called chiropractic adjustment can be of no possible value. The only value that could possibly come from any manipulation of the back would be the general massage of the muscles, and a member of the family of the patient is as well, if not better, qualified to do this than a chiropractor who is trying to correct a condition the etiology of which he does not understand or which is misinterpreted.

In other conditions which involve the back and in which the layman believes the chiropractors could give some relief are equally not amenable to their adjustments.

In spinal curvature, spinal tuberculosis or spinal injuries, the so-called spinal adjustments are directly harmful. In these conditions the spinal column needs rest and support rather than manipulation. I mention these conditions because many laymen are imbued with the belief that since the chiropractors administer their treatment or adjustment, as they call them, on the back that ailments of this region are at least to some extent amenable to chiropractic treatment. But a scientific study of the disease and of the treatment administered for its relief reveals the fact that in many such cases the so-called adjustments not only do no good but are of direct harm. I have investigated some of their claims by reading their mail course of instructions and find that all their deductions are based on false theories that can be proved false by any scientific investigator who is honestly seeking the truth. But this is not all. The chiropractors make claims that are entirely without foundation. I can best explain these claims by repeating a few cases as they came under my personal observation.

Cases Nos. 1 and 2 are best reported together because both patients were sufferers of internal cancer and had been apprized of their condition and its hopelessness, but in spite of being informed of what the regular medical profession thought of these conditions the chiropractor claimed that the condition was due to impingement of the spinal nerves and that chiropractic adjustments would relieve the condition. A few adjustments satisfied the patient that the treatment not only did no good but made conditions worse. Case No. 3: Retired minister, hard of hearing, was told by a chiropractor that the condition was due to some impingement of spinal nerves. He underwent spinal adjustments every other day for several months. During that time his ears were not examined to find any pathologic condition there. After a few months the spinal adjustment was abandoned by mutual agreement. Case No. 4: A middle aged lady had ptosis of the eyelid, which the chiropractors said was due to an impingement of some spinal nerve which needed adjustment. After three months of back pounding

for which she paid dearly, she got her eyes open to the fact that she was being swindled and quit the chiropractor with the ptosis still remaining as before.

These are the kind of men that are trying to squeeze into the medical profession by the enactment of a statutory law that gives them the right to go on with their false and preposterous claims of curing disease by slapping a man on the back. Many of our good laymen are misconstruing the motive of the medical profession in opposing the enactment of a law that gives the chiropractors legal standing in Missouri. They believe that our opposition to the law is from a selfish motive, but this is not the case. If the profession for one moment believed that there was a single scientific truth in the chiropractic theory they would adopt the same in their own practice.

We look on them as false prophets who prey on the gullibility of the common people. The only redeeming quality of the chiropractors in my opinion is that they will occasionally make a psychologic influence at the proper psychologic moment to psychologic mental suggestion of some hysteric person. This result is due to mental influence and not back pounding.

---

#### FREE PHYSICAL EXAMINATIONS

The St. Louis Medical Society has decided on a plan for making people better acquainted with themselves. In approving the plan, presented by the society's Defense of the Nation Committee, for free physical examinations of everybody presenting themselves, on designated dates, at the public high and grade schools and all of the parochial schools, the society is adding to the fine quality and abundant quantity of service it is endeavoring to render in a time of war. Such a service would have a value at any time. The proposal of the military authorities to have physical examinations made of all men registered in June will, if acted on, remove any necessity of a draft registrant using such an opportunity to find whether anything is the matter with him, and, if so, what it is. Male citizens of St. Louis between the ages of 21 and 31 years will not have to go to school to learn this vital knowledge. Those who are past the 31-age limit may, if they choose, go back to school and complete their education. This will be a postgraduate course for them, after a manner of speaking.

The uses of such inspection, to be continuing, we take it, after the war ends, are made clear by Dr. R. Emmett Kane, with whom the idea is said to have originated. "Thousands of persons are suffering from physical defects and diseases and don't know it," says the doctor. "The draft examinations each day are driving this startling fact home. Young men who thought they were in the best of health were told by examining physicians they had heart disease, kidney disease, liver trouble and other ailments. If this is true of men between the ages of 21 and 31, it is fair to assume that the ratio of defectives will increase between the ages of 31 and 41 and 51 years." That is sound reasoning, no matter what the man past middle age, and who passed a very trying examination for life insurance a decade or more ago and still never misses a day's work, may think about it. The doctors of the St. Louis Medical Society are giving a fine service to the country, and setting an example to their profession everywhere.—St. Louis *Globe-Democrat*.



# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

OCTOBER, 1917

### EDITORIALS

#### DR. W. T. FITZSIMMONS KILLED IN AIR RAID

Burning with hatred for Americans and possessed with a notion that frightfulness will intimidate the soldiers of the United States, the Germans perpetrated another of their numerous acts of barbarism, when on Sept. 4, 1917, an aeroplane dropped bombs on the Base Hospital of the Harvard Unit at Rouen, France. In this cowardly attack Dr. W. T. Fitzsimmons of Kansas City, first lieutenant in the Medical Reserve Corps, a member of the Jackson County Medical Society, was killed—the first American physician and the first officer in the American Army to make the supreme sacrifice in the war against autocratic dominance of human liberty. Not against the armed forces of American soldiers; not against our fighting men, equipped to give blow for blow, did the enemy launch his attack. His messenger of death was directed against the refuge of the injured soldiers and the army doctors and nurses sent to bind up their wounds, for the raid seems to have been planned with the deliberate intention of bombing hospitals. The Harvard Base Hospital Unit and the Washington University Base Hospital Unit are located very close together and, like all hospitals, they are plainly marked so that no air man could fail to identify them. The statement emanating from German sources that the raid was planned against a French flying corps said to be located not far in the rear of the hospitals, fails to carry conviction that the hospitals were unintentionally bombed. Far too many "accidents" to Red Cross ships, hospitals and noncombatants have occurred in the Prussian methods of attack for us to place credence in the report that this atrocity was not premeditated.

The following description of the raid was cabled from Paris to the Red Cross War Council at Washington by Major Grayson M. P. Murphy, Red Cross Commissioner to Europe:

"Five bombs were thrown; the explosions instantly killed Lieut. William T. Fitzsimmons of the Medical Officers Reserve Corps, United States Army, and three army privates, and wounded Lieuts. Clarence A. McGuire, Thaddeus D. Smith and Rea W. Whidden, Officers

Reserve Corps, United States Army, six privates, a woman nurse and twenty-two patients from the British lines, who were under treatment there for wounds already received. The aeroplane attack occurred at 11 o'clock at night. Just at that time, fortunately, no convoy of wounded was being received or the list of casualties would have been far greater, as one of the bombs fell into the center of the large reception tent to which the wounded are first borne for examination. Ten seconds sufficed for the dropping of the bombs from the first flying plane and within less than a minute afterward the surgeons of the hospital were at the task of collecting and attending those who had been struck down. And for twenty-four hours they were at work in the operating room, one surgeon relieving another when the latter from simple exhaustion could work no longer. And the very next day, just as if nothing had happened, these same surgeons were called upon to receive and care for 200 wounded sent in from the trenches of the British expeditionary force.

"The hospital has 1,800 beds under canvas in a quadrangle 800 feet square, is in a district in which there are many similar institutions and is unmistakable as a hospital. At the time the German aviator flew over it most of the surgical staff was engaged in making rounds of the wards. Lieutenant Fitzsimmons, however, was standing at the door flap of his tent. There had been a brief warning of the presence of a bombing aeroplane in the neighborhood, because a quarter of a minute before the sound of exploding bombs was heard from a point perhaps 200 yards from the hospital. This warning sufficed to cause all lights in the tents to be extinguished immediately, and those who had been under fire before threw themselves face down upon the ground. Then came five explosions in rapid succession in the hospital itself. The first two were directly in front of Lieutenant Fitzsimmons' tent. He probably never knew what happened to him, as his body was torn to shreds. The next two fell a hundred feet beyond in a five-marques ward, in which there are many patients, and the last struck the reception tent.

"Overhead there was no sound. The German aviator flew too high to be heard, but he left his identity behind him, not only in the bombs he dropped, but in the derisive handful of pfennigs he scattered upon the hospital as he whirled away. A number of these were found when light came. Lieutenant McGuire, who was in a tent adjoining that of Lieutenant Fitzsimmons, was struck by three bomb fragments, but was not seriously wounded. His escape was narrow, as there were more than a hundred holes cut in his tent. Lieutenant Smith was struck in the knee and Lieutenant Whidden in the chest while in their tents in

the officers' section of the quadrangle. The private soldiers injured were on duty as orderlies in the reception tent and the bomb fell almost upon them. So severely was Private Aubrey S. McLeod injured that it was necessary to amputate both his legs that night. Although the exploding bombs created horror in the hospital, there was not the smallest sign of panic, and the work of discovering the wounded and collecting them was immediately begun. This was made cruelly difficult by the darkness, but every one sprang to it with a will. Many of the injured had been blown from their cots, some even outside their tents, where they were found tangled up in the tent ropes.

"The American nurse, although struck in the face by a fragment of steel from the bomb, refused to be relieved and remained at her task courageously to the end. A hospital orderly who worked untiringly was found later to have been struck in the head by a fragment and painfully injured. He had just tied up his head and worked on. In the operating room Capts. Horace Binney and Elliott, with their assistants, worked all night long. Several delicate operations were performed, and their task was made all the harder by the fact that in innumerable cases the patients were in serious danger of infection from the pieces of wood and nails and dirt which had been thrown into their bodies. Lieut.-Col. E. U. Patterson, United States Army, commanding officer of the unit, and Major Harvey Cushing, head of the surgical force, the latter being at the front at the time of the disaster, have expressed the highest admiration for the manner in which the condition of the wounded is progressing satisfactorily."

---

### SURVEY OF THE MOBILIZATION OF THE MEDICAL PROFESSION

We have received from the Secretary of the American Medical Association the following communication:

"The American Medical Association, the constituent state associations and the component county societies have all assisted in the mobilization of the medical profession to meet the needs of the government in the present war. These activities have been more or less coordinated. It seems advisable now to make a survey of what has been done and to determine who of the medical profession have been commissioned in the Medical Reserve Corps of the army and other medical branches of the service.

"With this in view, we contemplate compiling a 'roll of honor' and assembling information which will show how the physicians of each county have responded to this call."

Communications from the Secretary of the American Medical Association will be sent to the county society secretaries from time to time

requesting information that will assist in making this survey as complete as possible. We suggest that such communications be given prompt and careful attention.

---

### MEDICAL STUDENTS AND INTERNS MAY CONTINUE STUDIES

On another page we publish the regulations prescribed by the President concerning the vexed question of drafting hospital interns and medical students. By the terms of this order medical students and interns may enlist in the Enlisted Reserve Corps and will then be allowed to continue their work until completion. Should a student or intern discontinue his medical education, he will of course at once become subject to order for active duty.

---

### BEWARE OF THIS IMPOSTOR

A man giving the name of O. A. Colwell, representing himself as a salesman for the Physicians Cabinet Company that Colwell said was formerly located at Indianapolis, Ind., but recently removed to Rochester, Minn., is probably an impostor. He collected \$43.50 from each of two members who ordered goods from him, although the goods were not to be delivered for thirty days. He says the Physicians Cabinet Company sells cabinets and a system of book-keeping for physicians. One of the members from whom he collected money wrote the company after paying Colwell, but his letter was returned marked "no such firm." We have made inquiry and find there is no such firm listed either at Indianapolis or at Rochester, Minn. Members are warned to avoid this individual.

---

### PATRONIZE OUR ADVERTISERS AND YOU WON'T BE DE- FRAUDED

We have repeatedly called attention to the advertisements in our JOURNAL and urged members to patronize these firms. The experience of two members mentioned in another editorial ought to impress our readers with the importance of consulting the advertising pages of our JOURNAL before they purchase goods, and especially before they patronize unknown firms. If the goods you want are not advertised in our JOURNAL you should write the editor for information concerning the companies that manufacture the articles you want. You will be put in communication with firms that are trustworthy.



## CASUALTIES IN THE GREAT WAR

From the St. Louis *Republic* we quote part of an editorial which holds considerable interest for physicians concerning casualties in the present war. The *Republic* says we are accustomed to look upon the European war as a sort of slaughter house of human beings, and as a whole the casualty figures in reality reach staggering proportions; that in single engagements where the troops are massed, machine guns and artillery have a chance to establish new records for the number of dead and injured.

"In proportion to the number of men engaged, however, the casualties are less than in any previous war. It may be surprising to learn that fewer English, French and Russian soldiers, in proportion to the number under arms, are falling than during the Napoleonic wars or the Civil War of the United States. It is a fact, however, proved by statistics.

"As regards the losses from disease and from wounds, there is no comparison between this and former wars. When it is stated that only 300,000 French soldiers have been discharged from the service on account of wounds, some idea of the effectiveness of the medical service in this war may be gained, for France has had 3,000,000 or more men constantly under arms for nearly three years.

"American soldiers will go into the war better equipped than any army that ever entered the field. They will have behind them not only unlimited money for all purposes, but all the experience gained by the British and French in three years of fighting. That our losses will be far less than those of our Allies have been is reasonably to be expected. That the wounded will be better and more efficiently treated than any army ever has been treated is assured by the fact that we will have seven physicians to every 1,000 men, while the British have only three per thousand. Here, again, we will profit by their experience and mistakes."

## A MEDICAL STUDENT'S CONTRIBUTION

In this issue we publish a paper written by a senior medical student. When it was composed the author had no idea that it would be used for any other than its original purpose, namely, to give his teacher an idea of how well he had assimilated the knowledge gained in his studies; but its excellence prompted the doctor in charge to offer the manuscript for publication in our JOURNAL as a fair sample of the kind of essay a modern medical student in his fourth year would produce in the ordinary course of his college work. While this composition is perhaps a trifle more finished than the average run of papers handed in by medical students, it is nevertheless a fact that the medical student of today is far superior to the student of a few years ago in educational qualifications and hence in mental capacity for solving the problems that confront him.

## BOOKS

"Books have always a secret influence on the understanding; we cannot at pleasure obliterate ideas; he that reads books of science, though without any desire fixed of improvement, will grow more knowing."

To grow more knowing is a duty the physician owes to himself, to his patients and to the community. Without books, periodicals and library equipment a physician cannot "grow more knowing" in his profession and as a consequence he quickly becomes a "back number." It is, therefore, imperative for the physician of today to scan the announcements of new books and periodical publications containing information of the latest developments in our science, not only in the cause and treatment of disease, but its prevention. On one of the advertising pages in this issue we publish a little talk on this subject and we hope our readers will give our effort their earnest attention.

CHIROPRACTIC TREATMENT FOR  
"CRABS"

A member sends the following clipped from a chiropractic publication. "As our correspondent says: It shows the profound (?) depths to which chiropractic investigation goes, and will no doubt make the race of *pediculi pubis* tremble in abject fear:

## CASE INQUIRIES AND ANSWERS

INQUIRY, CASE NO. 1013. "I am a constant reader of your paper (weekly) known as the Chiropractor.

"I am writing regarding a young man I have for a patient age 21. Good build and in perfect condition with the exception of the region known as the hypogastric and also pudendalis. Pubis vulgarly called by the laity crab.

"I find on examination of his spine an abnormal condition of the 1st lumbar, otherwise he seems to be in good condition and has perfect health.

"I have adjusted him twice and lo and behold upon examination I find they have multiplied 10 fold much to his discomfort.

"I have done my best to alleviate the untold suffering but of no avail.

"The last time I adjusted him I endeavored to pick some of them out after following this procedure for thirty minutes I became discouraged and stopped.

"Do you think this is a surgical case?

"Can you tell me the ultimate prognosis? He says several of his friends have the same condition but if the parasites grow on his friends and adhere so close don't you think a surgeon would be best.

"I realize that you are Peer of Chiropractors and second to none in judgment and skill."

ANSWER, CASE NO. 1013. The 1st lumbar you have found is the major in this case but it should be in combination with K. P. as the two go together in all conditions where parasites are found. Under adjustment you have probably caused much internal poisonous secretions to come to the surface. The quicker he gets this out of his system the better. It should go via kidneys but in the absence of perfect action there then the skin is better than having it stay in the body. By no means is this a surgical case. Continued adjustments is all he needs. It may be aggravating but nevertheless he can and will get well. Be patient and don't get discouraged. It may be a severe type and take somewhat longer than an acute case.

## OBITUARY

J. E. CONNELL, M.D.

Dr. J. E. Connell of Marshall, a graduate of St. Louis College of Physicians and Surgeons, 1889, died at his home after a short illness from septicemia. Dr. Connell was very prominent in the profession in Saline County and had the love and esteem of a wide circle of friends and the respect and confidence of the medical profession. He was a member of the Saline County Medical Society and the Missouri State Medical Association.

## NEWS NOTES

SEVERAL cases of infantile paralysis in Kansas City during September caused the Health Department to adopt special precautions against its becoming epidemic.

DR. E. LEE DORSETT of St. Louis has been appointed chief surgeon of the police department to succeed Dr. George W. Wilson, who resigned to take a position with the Rockefeller Research organization.

MR. GEORGE A. MEYER, president of the International Bank, St. Louis, has donated \$2,500 annually to maintain a free dental clinic for school children, and the board of education has accepted the donation.

A CORRECTION.—In our September issue we erroneously stated in the editorial, "Mr. Howell's View," that the symposium on physicians had appeared in the *Critic and Guide*. The symposium was published in the *Medical Review of Reviews*.

ON August 6, Dr. Floyd S. Bates of Adrian, Mo., who had been commissioned a lieutenant in the Medical Reserve Corps, stationed at Fort Riley, was instantly killed by lightning during a storm at the fort. Lieutenant George W. Belsche of Trenton, a member of the Grundy County Medical Society, was badly injured.

RED CROSS AMBULANCE No. 24, organized in Kansas City, has been ordered to Camp Funston, Fort Riley. The company is in charge of Capt. E. W. Cavaness of Kansas City, a member of the Jackson County Medical Society. The other physicians in the company are Lieuts. Harvey McCarthy, Joseph A. Beebe, Elmer J. Billick and Harry C. Antie.

WILLIAM DOCK, a son of Dr. George Dock of Washington University, St. Louis, has been decorated with the war cross by the French government for conspicuous bravery. He is serving in the American ambulance field service. George Dock, Jr., another son of Dr. Dock, is in the aviation service in France and received the war cross last spring.

DURING August the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Calco Chemical Company: Betanaphthol Benzoate-Calco.

The Diarsenol Company, Limited: Neodiar-senol Ampules, 0.15 gm., 0.3 gm., 0.45 gm., 0.6 gm., 0.75 gm., 0.9 gm.

Fairchild Bros. and Foster: Gastron.

Hoffmann-LaRoche Chemical Works: Tyramine-Roche.

Maltbie Chemical Company: Calcreose, Calcreose Solution, Calcreose Tablets, 4 grains.

THE Rockefeller Institute for Medical Research has recently opened a War Demonstration Hospital, on the grounds of the Institute, at Avenue A and 64th Street, New York, the funds for this purpose having been provided by a special appropriation of the Foundation.

The purposes of this hospital are to treat patients suffering from infected wounds by methods which have been developed in European Army hospitals, especially the methods developed by Dr. Alexis Carrel and Dr. H. D. Dakin, in the Military Hospital at Compiègne, France, and to demonstrate these methods in a practical way to American surgeons. The hospital will make no charge for treatment or care.

A FAKE doctor has been swindling people in Dunklin County by representing himself a specialist on catarrh. He induced several well-to-do farmers to have their cases diagnosed by him, pronounced them suffering from catarrh in each case, and told them he could cure them by an operation, which he guaranteed. Several of the victims took the alleged cure, and signed up papers to that effect. The doctor then proceeded to operate by "burning out the disease," he claimed, and immediately pronounced the patient cured and demanded his pay. When one of them demurred and wished time to ascertain whether the operation was a success, the doctor became abusive, and was requested to get off the place. Better patronize home doctors, who are here to make good their promises.—*Enterprise-Courier*, Charleston, Mo.



APROPOS of the care of the inmates at State Hospital No. 4 at Farmington, under the management of the new superintendent, Dr. J. L. Eaton, the *Fredericktown Democrat-News* comments editorially as follows:

Reports from Farmington indicate that there is a new order of things at Hospital No. 4. The first thing Dr. Eaton did, upon assuming charge, was to order more and better food for the patients. The public will heartily commend that act. What if it does cost more? The great state of Missouri has no desire to practice economy at the expense of that great number of unfortunates. We do know that the new system will cost more. It may be that the business ability of Dr. Eaton will cut the cost; but there is not a humane citizen in Missouri who will object to spending a few thousand dollars additional to bring an additional degree of happiness to the hundreds of patients under Dr. Eaton's charge.

Examinations made by the Bureau of Chemistry of the United States Department of Agriculture show that very little zinc oxide on the market complies with the standards of the U. S. Pharmacopoeia. Nearly all the samples examined contained an excessive amount of lead. The samples were labeled "Not U. S. P.—Containing Small Quantities of Lead," and therefore complied with the Food and Drugs Act. The labels on the packages in most instances will come to the attention of the druggists but not to the attention of physicians. The medical profession will therefore not be advised as to whether or not zinc oxide preparations are made from standard ingredients. Conditions may arise where a zinc oxide preparation contaminated with lead may do injury. A limited supply of U. S. P. zinc oxide is available and physicians may protect themselves and their patients from possible injury by calling for such material on their prescriptions.

A WAR meeting will be held at Washington, D. C., Oct. 17-20, 1917, by the American Public Health Association. This will replace the annual meeting which was to be held at New Orleans, La., Dec. 4-7, 1917.

The papers and conferences will deal largely with the health problems created by the Great War—the food supply, communicable diseases among soldiers, war and venereal diseases, war and the health of the civil population, etc.

President Wilson has said: "It is not an army we must shape and train for war; it is a nation." Go to the Washington meeting; then come back and do your bit!

Washington will be crowded and those interested are urged to reserve hotel accommodations at once. It will be easy to cancel reservations, but it may be impossible to obtain

rooms at the last moment. Any hotel or railroad can give a list of Washington hotels.

Preliminary programs will be automatically mailed to all members of the A. P. H. A. about September 15. Nonmembers may receive them free by writing to the American Public Health Association, 126 Massachusetts Ave., Boston, Mass.

THE death of Dr. William T. Fitzsimmons, who was killed by a bomb dropped from a German aeroplane while he was on duty at the Harvard Base Hospital Unit in France on September 4, aroused the medical profession and the entire population of Kansas City, where he had practiced and was very highly esteemed for his professional ability and clean, upright life. On Thursday morning, September 13, solemn high mass was celebrated in the cathedral at Kansas City, and in delivering the sermon Bishop Lillis referred to Lieutenant Fitzsimmons as "the first American martyr to die for universal peace." It was an impressive occasion, attended by the Jackson County Medical Society in a body, 200 soldiers and a large audience that filled the spacious building and overflowed into the street. A spontaneous desire on the part of the friends of Dr. Fitzsimmons has resulted in a movement to raise a fund for erecting a memorial to his memory. In the raid that caused the death of Dr. Fitzsimmons, several physicians were wounded, among them First Lieut. C. A. McGuire of Kansas City. The others who sustained injuries are First Lieut. Ray W. Whidden of New York City and Thaddeus D. Smith of Neenah, Wis. Their injuries were only moderate and the doctors will doubtless rapidly recover. Nurse Eva Parmalee of the Army Nurse Corps, also sustained slight injuries.

## MEMBERSHIP CHANGES, SEPTEMBER, 1917

### CHANGE OF ADDRESSES

James T. Axline, 4143 Newstead, to 4516 Bircher Rd., St. Louis.

Charles M. Bauman, 5461 Delmar, to 5046 Vernon, St. Louis.

Logan Clendening, Rialto Bldg., to 231 East Craig Pl., San Antonio, Tex.

T. A. Coffelt, 303 Baker Block, to 508 Woodruff Bldg., Springfield.

J. E. Dewey, Woodruff Bldg., to 1211 N. Jefferson, Springfield.

W. L. Ellery, LaGrange, to 2725 Washington Ave., St. Louis.

Meyer J. Epstein, 4046 McPherson, to 5381 Berlin, St. Louis.

Thomas Field, 2602 E. 15th St., to 303 New Center Bldg., Kansas City.

F. H. Fulton, 21st and Troost, to 2303 Troost Ave., Kansas City.

Arnold Garlitz, Danville, Ill., to National Home, Wisconsin.

Eugene C. Gehrung, Quincy, Ill., to 3836 Westminster Pl., St. Louis.

F. N. Gordon, 201 Lister Bldg., to 4552 McMillan, St. Louis.

H. G. Greditzer, 5567 Waterman, to 5398 Berlin, St. Louis.

L. K. Guggenheim, Carleton Bldg., to 5579 Waterman Ave., St. Louis.

Elmer E. Holt, St. Louis, to Mena, Ark.

J. P. Kanoky, 610 Commercial Bldg., to 832 Rialto Bldg., Kansas City.

A. C. Leonard, 706 Bryant Bldg., to 3821 Harrison Blvd., Kansas City.

F. L. McCormick, Darksville, to Moberly.

James F. McFadden, Foxboro, Mass., to St. Louis.

Charles L. Munson, 731 South Broadway, to 1002 Syndicate Trust Bldg., St. Louis.

Charles E. Pierce, Brookline Station, to Republic.

R. L. Pipkin, 223 South St., to 324 Landers Bldg., Springfield.

Edwin H. Roberts, Marshfield, to Washington, D. C.

Lawrence Schlenker, 7623 South Broadway, to 3515 South Grand Ave., St. Louis.

G. E. Scrutcheff, Farmington, to Marshall.

Frederick O. Schwartz, Wall Bldg., to Metropolitan Bldg., St. Louis.

Edwin L. Sheahan, 3637 Finney Ave., to 1201a Clara Ave., St. Louis.

W. M. Smith, 200½ East Commercial St., to 506 Holland Bldg., Springfield.

Frank R. Teachenor, 425 Argyle Bldg., to 3230 Woodland Ave., Kansas City.

John J. Tucker, 101½ Missouri Ave., to 222 Illinois Ave., St. Joseph.

C. M. Westerman, 1325 Syndicate Trust Bldg., to 6134 Washington Ave., St. Louis.

H. McClure Young, 600 Carleton Bldg., to 1401 Third National Bank Bldg., St. Louis.

#### REINSTATED

W. L. Diggs, New Madrid.

J. W. Songer, Pt. Pleasant.

Homer E. Songer, Kansas City.

#### RESIGNED

Harry E. Dunlop, Canton.

W. M. Jarvis, Slater.

#### DROPPED

Clarence V. Smith, Detroit, Mich.

J. R. Van Atta, Kansas City.

#### DECEASED

LeGrand Atwood, St. Louis.

J. E. Connell, Marshall.

W. T. Fitzsimmons, Kansas City.

## MISCELLANY

### MISSOURI PHYSICIANS EXAMINED FOR COMMISSION IN MEDICAL RESERVE CORPS

#### ST. LOUIS

Abbott, Fred  
Alch, George  
Alexander, R. D.  
Allison, Nathaniel  
Applewhite, Lee D.  
Axline, J. T.  
Ayars, T. R.  
Backhausen, ?  
Baerens, O. F.  
Bailey, F. W.  
Baker, C. E.  
Bauman, C. M.  
Beck, Edw. C.  
Bell, Howard H.  
Belsey, W. A.  
Blair, V. P.  
Bock, L. H.  
Bosserman, D. C.  
Bourbon, R. P.  
Boutelje, S. S.  
Boutwell, Lloyd R.  
Bradley, J. M.  
Bradley, Wm. C.  
Bremser, H. L.  
Brookes, H. I.  
Brooks, Theo. P.  
Brown, Clyde O.  
Brown, W. S.  
Bryan, R. Shepard  
Burdick, C. H.  
Burke, ?  
Burns, Robt., Jr.  
Burns, Stanley S.  
Calhoun, D. S.  
Calhoun, J. G.  
Cameron, Solon  
Campbell, O. H.  
Campbell, Roscoe C.  
Carley, H. D.  
Casey, E. B. M.  
Chandeysson, P. I.  
Chattle, W. M. K.  
Cheatham, W. A. (colored)  
Clapsaddle, C. J.  
Clark, I. Ross  
Clopton, M. B.  
Coffin, E. L.  
Cole, H. H.  
Cook, J. T.  
Cook, Ralph L.  
Cooley, E. L.  
Crossen, H. S.  
Dallwig, E. L.  
Diehl, C. H.  
Dixon, I. F.  
Dixon, E. K.  
Dorris, R. P.  
Dripps, Roy C.  
Dudley, C. R.  
Eberbach, C. W.  
Edler, Wm.  
Elkins, ?  
Ellis, R. V.  
Eyer mann, Chas. H.  
Ernst, Edwin C.  
Fay, Harold W.  
Fischel, Walter  
Fisher, Roland F.  
Fitzpatrick, J. P.  
Fletcher, L. Z.  
Fletcher, Paul R.  
Floyd, F. M.  
Foster, H. M.  
Foster, Wm. H.  
Fox, S. D.  
Frank, A. M.  
Fry, Walter F.  
Fuert h, Arthur L.  
Funkhouser, R. M.  
Funsch, E. C.  
Fuson, Levi H.  
Gebhardt, A. C.  
Gettinger, A. J.  
Gibbs, F. LeG.  
Gibson, Robt. H.  
Gilbert, Allan A.  
Gordon, M.  
Gosser, Fred  
Green, Phillip

Greenfelder, H. B.  
Griot, A. J.  
Griot, Geo. A.  
Hale, T. H.  
Halley, Claude D.  
Hamel, Albert H.  
Harbour, S. C.  
Hardesty, J. F.  
Harrell, Charles  
Haynes, S. E.  
Hawley, Nelson J.  
Heiple, E. E.  
Heithaus, A. S.  
Herrick, A. C.  
Herriott, C. E. (colored)  
Heuer, Scott  
Heuman, G. W.  
Higson, J. W.  
Hobson, Abraham D.  
Hogh, F.  
Hurford, P. G.  
Hurt, J. E. (colored)  
Husband, W. G.  
Hutton, J. L.  
Hynes, J. C.  
Irwin, E. L.  
Jones, A. B.  
Johnson, Roy  
Johnson, R. W.  
Johnston, Meredith  
Keith, Wm. F.  
Kelley, I. D.  
Kemp, Thos. J.  
Kennedy, A. F.  
Koenig, Geo. H.  
Konzelmann, John A.  
Koonitz, C. J.  
Kouri, Martin F.  
Kramolowsky, H. H.  
Kuhlmann, F. C. E.  
Langendorf, H. S.  
Larimore, Jos. W.  
Lawrence, Wm. Scott  
Lee, E. J.  
Leggat, A. C.  
Lehman, C. P.  
Leighton, W. E.  
Levin, S. S.  
Lewald, James  
Lewis, B. W.  
Link, Edward X.  
Loeb, H. W.  
Loeb, Virgil  
Lonsway, M. J.  
Lowenstein, P. S.  
Luedde, W. H.  
Lyman, H. W.  
Macklin, Lurin P.  
Max, C. O. C.  
McCarthy, Eugene F.  
McCarty, E. D.  
McClellan, John W. (colored)  
McClure, T. C.  
McCoy, G. C.  
McCulloch, Hugh  
McHenry, R. R.  
McKittrick, O. F.  
McMahon, B. J.  
Meiners, E. P.  
Mellies, W. J.  
Meyers, Monte M.  
Montgomery, C. F.  
Mueller, C. J.  
Mayes, A. H.  
Mestermacher, L. H.  
Miehe, W. J.  
Mook, Wm. H.  
Moore, H. M.  
Morfit, John C.  
Munson, Carlos L.  
Murphy, A. J.  
Murphy, Fred T.  
Murphy, J. H.  
Murrell, C. P.  
Myers, E. L.  
Myers, Geo. M.  
Newman, Percy B.  
Null, W. H.  
Nulsen, W. L.



O'Donnell, H. S.  
Olmsted, W. H.  
Opie, E. L.  
Orndoff, H. L.  
Owen, R. E.  
Owens, Bert O.  
Pack, S. E. (colored)  
Payne, Richard J.  
Paquin, Ozias  
Pearl, A. E.  
Pecant, H. V.  
Peden, D. C.  
Pelletieri, S. M.  
Penny, David L.  
Perrings, F. S.  
Pickrell, C. D.  
Poehl, G. W.  
Poos, E. E.  
Post, M. Hayward  
Post, Lawrence T.  
Pote, Thos. B.  
Proetz, Arthur W.  
Pulliam, M. J.  
Raithel, G. H.  
Ramming, H.  
Ravold, Amand N.  
Redington, J. C.  
Rives, Thos. L.  
Rogers, Hugh E.  
Rothman, J.  
Ryan, L. A.  
Ryan, L. M.  
Sale, Llewellyn  
Say, W. J.  
Scherman, L. W.  
Schlueter, R. E.  
Schmitz, E. F.  
Schreffler, A. R.  
Schroeder, W. H.  
Schwab, Sidney I.  
Seelig, M. G.  
Sellers, C. L.  
Sewing, Arthur H.  
Sharpe, N. W.  
Shumaker, Chas. H.  
Sippy, A. H.  
Slaughter, F. M. (colored)  
Smith, O. E.  
Smith, W. A.  
Smith, W. I.  
Spivy, R. M.  
Steinman, W. A. H.  
Steinle, G. H.  
Stewart, J. E.  
Stewart, J. W.  
Stewart, S. S.  
Strauss, A. E.  
Suggett, O. LeG.  
Sweany, R. B. T.  
Taylor, H. I.  
Thomas, W. S.  
Thompson, J. C.  
Threadgill, J. N.  
Tierney, J. L.  
Tonney, A. R.  
Turek, A. E.  
Ude, Waldemar  
Unterberg, H.  
Urbanowski, ?  
Veeder, Borden S.  
Vineyard, R.  
Vosburg, C. A.  
Vosburg, M. D.  
Wainwright, A. G.  
Walther, R. A.  
Westerman, C. M.  
Wilhelmi, Otto J.  
Wilhite, G. O.  
Wilkes, Benj. A.  
Williams, R. H.  
Williams, R. S.  
Williamson, M. R.  
Wilson, Frank N.  
Winn, Wm. B.  
Woodruff, F. E.  
Wood, J. B.  
York, Wm. B.  
Young, H. McClure  
Young, N. A.  
Zepin, David

## STATE AT LARGE

Allen, Wm. H., Urich  
Ames, A. C., Mt. Grove  
Appleberry, Dailey, Bonne Terre  
Appleberry, Reuben, Leadwood  
Armstrong, J. H., Kirkwood  
Arnold, Romus, Carthage  
Ashley, Hugh V., Bloomfield

Atherton, J. LeRoy, Springfield  
Bailey, Wm. T. J., Cassville  
Baker, Jos. H., Montreal  
Balsley, Clyde M., Joplin  
Barnes, F. A., Thayer  
Baysinger, S. L., Rolla  
Beckemeyer, Wm., Sedalia  
Benjamin, A. J., Bernie  
Berry, J. W., Cape Girardeau  
Biggs, James B., Bowling Green  
Birchett, J. G., Cardwell  
Birsner, L. J., Ste. Genevieve  
Blankenship, E. P., Houston  
Bogard, Edward, Lilbourn  
Bond, F. G., Poplar Bluff  
Bonne, John C., Charleston  
Box, E. M., Springfield  
Bragdon, George H., Reeds  
Brandon, W. L., Broseley  
Brennan, J. T., Vichy  
Breuer, Wm. H., St. James  
Brown, Chas. H., Fair Play  
Brown, Chas. W., Campbell  
Bryant, Jewel A., Rombauer  
Buchanan, J. E., Webster Groves  
Byrns, R. E., Koch  
Campbell, Roscoe C., Forest Green  
Caldwell, W. C., Essex  
Carter, Howard, Webster Groves  
Cochran, J. H., Gideon  
Carthrae, Lewis, Corder  
Cadwell, Victor, Poplar Bluff  
Cardwell, Clarence, Stella  
Chipp, J. K., New Hampton  
Coats, C. C., Winston  
Cook, J. L., Advance  
Cooper, James F., Hannibal  
Corn, J. A., Amoret  
Crabtree, Benj. F., Joplin  
Crank, A. C., Canton  
Cutler, Robt. R., Berger  
Dagg, George R., North Kansas City  
Damron, M. R., Dewitt  
Dangerfield, Otto E., Luray  
Dangerfield, V. S., Luray  
Davis, P. C., Madison  
Delzell, Wm. A., Springfield  
Denton, W. H., Braggadocia  
Dewey, J. E., Springfield  
Douglas, J. H., Dexter  
Eads, L. J., Hamilton  
Edens, L. M., Cabool  
Egbert, T. H., Kenneth  
English, J. H., Flat River  
Evans, H. T., Springfield  
Ewing, F. C., Webster Groves  
Ezickson, Wm. J., Webb City  
Fair, W. A., Pleasant Hill  
Fallet, C. E., DeSoto  
Farmer, Le Roy, Hartville  
Ferguson, L. J., Brookfield  
Ferguson, W. J., Sedalia  
Fessenden, E. M., Springfield  
Finney, Wm. O., Chaffee  
Fulton, Wm. I., Mt. Vernon  
Garner, K. C., Crosstown  
Gassow, A. A., St. Charles  
Gaston, S. E., Meta  
Gausepohl, L. E., St. Elizabeth  
Gay, Ray J., New Hartford  
Glynn, Robt., Springfield  
Goodrich, Harold A., Webster Groves  
Goodson, F. N., St. Joseph  
Grace, Thos. A., Excelsior Springs  
Greenwood, V. H., Buffalo  
Griffith, Edgar McD., Creighton  
Grunway, T. P., Bevier  
Guyot, Julian D., Bucklin  
Hahn, Chas. N., Dunnegan  
Haley, R. R., Brookfield  
Hall, Stanley M., Clarence  
Hamilton, G. M., Coffman  
Hamilton, Howard A., Dry-nob  
Hardesty, Joel W., Hannibal  
Harmon, Wm. R., Springfield  
Harrison, E. F., Kennett  
Hess, John D., Clarkton  
Hethcock, J. C., Morehouse  
Hill, H. R., Bachelor  
Hodges, Thos. L., Esther  
Hoefler, E. A., Marceline

Hoel, Wm. M., Lockwood  
Hogan, Robt. E., West Plains  
Hope, Daniel H., Girardeau  
Insley, Herbert W., Rich Hill  
Johnson, Edward N., Clarkdale  
Johnson, G. C., Belle  
Jordan, J. E., Columbia  
Kennedy, J. J., Frankford  
Kerr, W. B., Dudley  
Kerr, H. L., Crane  
Kissel, Julius P., Centralia  
Knecht, L. B., Poplar Bluff  
Koch, O. W., Ballwin  
LaRue, Frank, Dexter  
Lawrie, William H., Cape Girardeau  
Laws, C. J., Princeton  
Leon, Moses, Clayton  
Leslie, James F., Barnett  
Lester, R. B., Desloge  
Lindsay, Howard, Ironton  
Logan, James A., Warsaw  
Long, Chas. R., Sedalia  
Long, Louis H., Denver  
Lowe, Horace A., Springfield  
Luman, F. E., Baring  
Lyle, C. F., Boonville  
Mackey, D. E., Clayton  
Mallette, Lester T., Naylor  
Manes, C. E., Stella  
Maples, F. H., Clever  
Martin, S. P., Jr., East Prairie  
Martyn, J. H., Cuba  
Mayfield, L. S., Ilmo  
McGinnis, Clive S., Sedalia  
McComas, A. R., Sturgeon  
McRaven, Claude, Marston  
Menefee, B. F., Montgomery City  
Mercer, Ray, Canton  
Mill, R. F., Odessa  
Millar, R. C. M., Foristell  
Monroe, Lee F., Bonne Terre  
Moore, Chas., Advance  
Moore, Roy D., Clayton  
Murrell, R. J., Kirkwood  
McKinney, J. J., Morehouse  
Murray, S. A., Holden  
Myers, Roy E., Stark City  
Nickell, Luther C., Granville  
Nieweg, G. A., Van Cleve  
Ogilvie, R. K., East Prairie  
Orr, C. C., Mendon  
Orr, Chas. H., Ash Grove  
Owen, R. J., Mill Springs  
Parker, R. H., Moscow Mills  
Patton, W. G., Farmington  
Penn, G. E., McKittrick  
Pennington, G. R., West Alton  
Penn, R. M., Steedman  
Poe, Chester A., Fruitland  
Potter, A. E., Ebenezer  
Potts, J. M., Springfield  
Proctor, C. A., Donniphon  
Ragan, Stephen T., Moberly  
Ralls, L. B., Centerville  
Ramsay, Cary I., Napoleon  
Randall, Leslie C., Licking  
Rawhauser, J. L., Greenfield  
Reser, T. S., Cole Camp  
Ricketts, F. B., Leslie  
Robinson, Guy F., Koch  
Rothman, Henry L., Washington  
Russell, Richard Lee, Humansville  
Sale, O. A., Granby  
Schmidr, Wm. C., Augusta  
Schoenfeld, Otto E., Lathrop  
Schudde, O. N., Sullivan  
Schwald, N. A., Cole Camp  
Scrutchfield, G. E., Marshall  
Shelby, M. H., Charleston  
Singleton, D. E., Clarence  
Smith, C. A., Osceola  
Smith, E. S., Macon  
Smith, L. L., Bethel  
Spence, E. L., Fulton  
Spencer, F. B., Hannibal  
Stone, A. R., Palmyra  
Stone, Murry C., Springfield  
Streeter, Roderick D., Moberly  
Stumberg, B. Kurt, St. Charles  
Tainter, F. J., St. Charles  
Tarr, G. H., Poplar Bluff  
Thompson, Preston, Brumley  
Toney, Lee E., Piedmont  
Topping, Moses H., Flat River  
Twyman, G. T., Independence

Vessells, Francis M., Perryville  
Waldo, E. E., Hannibal  
Wallace, W. H., St. Joseph  
Wallen, Luther H., Sumnerville  
Warneld, S. H., Louisiana  
Watkins, G. I., Farmington  
Wells, G. D., Strafford  
Werner, J. P., Maplewood  
West, W. E., Trenton  
Wessel, W. C., Hermann  
Wessling, A. L., Springfield  
Weston, Ursula C., Osgood  
White, Wm. G., Lewistown  
Whiteside, E. E., Elvins  
Wittwer, E. C., Mountain Grove  
Williams, P. R., Cape Girardeau  
Wills, Wm. J., Springfield  
Wilson, J., Bloomfield  
Wilson, R. E., LaBelle  
Wood, A. M., Lenton  
Wyatt, Douglass, Mineola  
Wyer, Harry G., Kirkwood  
Young, Estil Y., St. Joseph

## KANSAS CITY

Albright, H. R.  
Altringer, A. N.  
Aull, John  
Beebe, J. A.  
Bellows, Geo. S.  
Billick, Elmer J.  
Carver, H. N.  
Clark, Morris H.  
Cooper, Geo. S.  
Davis, C. J.  
Deweese, E. R.  
Dively, Rex L.  
Dugay, H. W.  
Duke, W. W.  
Foster, Forest F.  
Fletcher, T. A.  
Frazier, C. E.  
Gammage, T. R.  
George, John Henry  
Gittleston, J.  
Glynn, Wm. J.  
Harris, Edmond L.  
Hartman, Milo E.  
Haworth, Dillon B.  
Hedgpeth, Geo. W.  
Hedrick, H. B.  
Hibbard, S. B.  
Hill, W. H.  
Hirschberg, Saml. B.  
Hoagland, W. L.  
Hopkins, C. D.  
Humbert, Chas. R.  
Hunt, C. J.  
Jackson, Jabez N.  
Jones, Dan P.  
Jones, Z. G.  
Koch, Geo. L.  
Lane, H. H.  
LaRue, H. N.  
Laning, J. H.  
Leonard, W. A.  
Lyle, Halsey  
Lynch, J. C.  
Mabie, L. D.  
Maddox, Jesse  
Mark, E. G.  
McCarthy, Harvey  
Middlebrook, Robt.  
Mitchell, Geo. B.  
Murphy, J. H.  
Ousley, Jas. W.  
Ramsey, E. D.  
Reagan, Stephen Y.  
Salzberg, Ben A.  
Sanford, J. R.  
Shelton, Wm. A.  
Shumate, E. L.  
Smith, Clinton K.  
Stofer, E. Stanton  
Swanson, J. T.  
Tinges, F. J.  
Whitney, Solon C.  
Whittaker, John H.  
Wilson, Chas.  
Wilson, Chas. E.  
Zugg, Clark W.  
Zwart, B. H.

### CONDITIONS ON WHICH MEDICAL STUDENTS AND HOSPITAL INTERNS MAY CONTINUE THEIR STUDIES

The Provost Marshal General has sent the following to the governors of all states:

The President prescribes the following Supplemental Regulations governing the execution of the selective service law:

First. Hospital interns who are graduates of well-recognized medical schools or medical students in their fourth, third, or second year in any well-recognized medical school who have not been called by a local board may enlist in the Enlisted Reserve Corps provided for by Section 55 of the National Defense Act under regulations to be issued by the Surgeon-General, and if they are thereafter called by a local board they may be discharged on proper claim presented on the ground that they are in the military service of the United States.

Second. A hospital intern who is a graduate of a well-recognized medical school or a medical student in his fourth, third, or second year in any well-recognized medical school, who has been called by a local board and physically examined and accepted and by or in behalf of whom no claim for exemption or discharge is pending, and who has not been ordered to military duty, may apply to the Surgeon-General of the Army to be ordered to report at once to a local board for military duty and thus be inducted into the military service of the United States, immediately thereupon to be discharged from the National Army for the purpose of enlisting in the Enlisted Reserve Corps of the Medical Department. With every such request must be inclosed a copy of the local board calling him to report for physical examination (Form 103), affidavit evidence of the status of the applicant as a medical student or intern and an engagement to enlist in the Enlisted Reserve Corps of the Medical Department.

On receipt of such application with the named inclosures the Surgeon-General will forward the case to the Adjutant-General with his recommendations. Thereupon the Adjutant-General may issue an order to such intern or medical student to report to his local board for military duty on a specified date, in person or by mail or telegraph, as seems most desirable. This order may issue regardless of the order of liability for military service. From and after the date so specified such person shall be in the military service of the United States. He shall not be sent by the local board to a mobilization camp, but shall remain awaiting the orders of the Adjutant-General of the Army. The Adjutant-General may forthwith issue an order discharging such person from the military service for the convenience of the Government.

Three official copies of the discharge order should be sent at once by the Adjutant-General to the local board. On receipt of these orders the local board should enter the name of the man discharged on Form 164A and forward Form 164A, together with one of the certified copies of the order of discharge, to the mobilization camp to which it furnishes men. The authorities at the mobilization camp will make the necessary entries to complete Form 164A, and will thereupon give the local board credit on its net quota for one drafted man.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Wright County Medical Society, Dec. 5, 1916.  
 Webster County Medical Society, Dec. 6, 1916.  
 Platte County Medical Society, Dec. 8, 1916.  
 Cape Girardeau County Medical Society, Dec. 15, 1916.  
 Livingston County Medical Society, Dec. 16, 1916.  
 Madison County Medical Society, Dec. 17, 1916.  
 Carter-Shannon County Medical Society, Dec. 20, 1916.  
 Atchison County Medical Society, Dec. 26, 1916.  
 Linn County Medical Society, Dec. 30, 1916.  
 Clark County Medical Society, Dec. 30, 1916.  
 Benton County Medical Society, Dec. 30, 1916.  
 Chariton County Medical Society, Jan. 1, 1917.  
 Schuyler County Medical Society, Jan. 5, 1917.  
 Crawford County Medical Society, Jan. 9, 1917.  
 Adair County Medical Society, Jan. 10, 1917.  
 Dent County Medical Society, Jan. 10, 1917.  
 Mississippi County Medical Society, Jan. 16, 1917.  
 Camden County Medical Society, Jan. 23, 1917.  
 Barton County Medical Society, Jan. 30, 1917.  
 Scott County Medical Society, Feb. 13, 1917.  
 Cooper County Medical Society, Feb. 21, 1917.  
 Gentry County Medical Society, Feb. 28, 1917.  
 Marion County Medical Society, March 1, 1917.  
 Ralls County Medical Society, March 13, 1917.  
 Perry County Medical Society, March 20, 1917.  
 Ste. Genevieve County Medical Society, March 27, 1917.  
 Reynolds County Medical Society, March 30, 1917.  
 Polk County Medical Society, April 7, 1917.  
 Pike County Medical Society, April 11, 1917.  
 Howell County Medical Society, April 17, 1917.  
 Cass County Medical Society, April 18, 1917.  
 Sullivan County Medical Society, April 20, 1917.  
 Ray County Medical Society, April 25, 1917.  
 Taney County Medical Society, May 1, 1917.  
 Vernon County Medical Society, May 10, 1917.  
 Dade County Medical Society, May 12, 1917.  
 Holt County Medical Society, May 14, 1917.  
 Carroll County Medical Society, May 23, 1917.  
 Pemiscot County Medical Society, June 6, 1917.  
 Laclede County Medical Society, June 13, 1917.  
 Johnson County Medical Society, June 27, 1917.  
 Putnam County Medical Society, Aug. 5, 1917.  
 Audrain County Medical Society, Aug. 9, 1917.  
 Clay County Medical Society, Aug. 28, 1917.

### THE SURGEONS CLUB OF ST. LOUIS

Dec. 20, 1916

#### PRESENTATION OF CASE SHOWING PLASTIC ON PENIS—By H. S. McKAY, M.D.

This patient came to me about a year ago. He had gotten his clothing caught in a flywheel of a gasoline engine, which tore most of his clothing off and denuded the penis completely of skin; also the pubes, and a small portion of the scrotum. The pubic bone was exposed.

I saw him the following day and because there was considerable foreign material in the wound, such as particles of clothing I decided not to do an immediate



plastic. On the second or third day a rather violent infection had developed, which burrowed downward back of the pubes, so it was necessary to wait until this infection cleared. I then took a portion of the skin of the scrotum and transplanted it around the penis. This healed very kindly and left some retraction of the penis downward on account of the scar tissue retracting.

The patient returned a couple of weeks ago for the repair of a right inguinal hernia which he had had at the time, but which I did not operate on because of the infection. I closed the hernia and reduced to some extent the pulling down of the penis by the scar tissue.

The interest in the case is the rarity of the accident, I believe, more than anything else. The plastic was a rather simple matter.

#### DISCUSSION

DR. C. E. BURFORD: I have had some experience at the City Hospital with these retractions, and I believe it will be very easy for Dr. McKay to do a little cross incision on that cord below, lengthen the tissue upward and contract it from side to side.

I had a case last year where the skin had been destroyed by chancroidal infection on one side of the penis, and the penis became plastered to the thigh and scrotum on one side, and the glans had grown down tight to the thigh. It could not be moved half an inch from the thigh. On the other side there were no adhesions and there was a redundancy of skin. We buttonholed the skin on the opposite side of the penis and sutured it down so that the most distal portion was nearest the belly. We got a very fair union and nice result. We were able to lengthen the distortion considerably on that side.

#### SYMPOSIUM ON OBSTRUCTIONS AT THE VESICAL NECK—DIAGNOSIS.—By DR. JOHN R. CAULK.

In arriving at a diagnosis of obstruction at the vesical neck there are three important phases to be considered. The first thing is to try to be cognizant of the symptoms which are indicative of obstruction at the neck; the second, to recognize the nature and the extent of the obstruction; the third, to appreciate the complex.

In the first place our trial comes with the internist, the general practitioner, to get him to appreciate the fact that the old man who has to urinate frequently—the young man, too, but particularly the old man, because the commonest obstruction at the vesical neck is from the prostate—is not compelled to go on and suffer, but that these urinary symptoms usually represent obstruction which has associated with it residual urine, and a residual urine, if progressive—which it usually is if the obstruction lasts long—has as its accompaniment renal impairment from back pressure.

One important thing which has impressed me in the preliminary history of these patients is that so many of them have gone on for a long time with incontinence. It was thought that they had irritable bladder and the patient's full bladder was not suspected. Also, our medical brother must be taught that the one characteristic thing of this high residual urine back pressure is uremia; and that the commonest symptom of uremia is particularly the emotional and gastrointestinal type—that is, the looseness, the nausea, the vomiting, particularly in the morning, etc. We must also impress them with the fact that the surgeon does not lose 50 per cent., as has been supposed, in this class of cases. We are glad to see that they are becoming awakened to the fact that such is not the

case, and it is due, I believe, to this appreciation of uremia and to their study of the cases in a diagnostic way.

With reference to the second topic, that is, a diagnosis of the nature and extent of the obstruction, I will try to be as brief as possible; and will not go into a systematic and dogmatic delineation of the various methods which we have at our command, except to mention briefly the external tenderness. There is seldom anything very significant except perhaps an epididymitis. We seldom get any renal tenderness; seldom any renal enlargement, that is any palpable renal enlargement. A good number of pyelonephritis cases are not associated with enlarged kidneys or with tender kidneys.

The next most important thing would be a rectal examination, and in rectal examination we have something that is too frequently neglected. I have noticed often in looking over records that men would not put down the tone of the rectal sphincter. The tonicity of the rectal sphincter may often give us the first indication of a central nervous trouble not due at all to the prostate. The size of the prostate, determined by rectal examination, is sometimes misleading. We often may have enormously enlarged lateral lobes, feeling rectally, without much intravesical obstruction. On the other hand, we may have a very small prostate with large middle lobe. This must all be noted. The one important thing in the rectal examination is to differentiate between three things particularly, as far as obstruction is concerned; inflammatory prostate, hypertrophic prostate, which is the large, firm, elastic prostatic, and cancer of the prostate. Cancer of the prostate is usually small unless it is in a preexisting hypertrophic organ, irregular and nodular. There is also tabes. In our series of tabes—we have just been studying 125 cases of tabes and various cerebrospinal diseases—we find that almost invariably the rectal sphincter is first attacked, and the rectum is ballooned while the prostate is most frequently small in these individuals. So the rectal examination is a very important diagnostic feature.

With reference to the differential diagnosis between cancer and hypertrophy, briefly, the symptomatology is the same. There is no difference except the pain. Pain in prostatic cancer is very often quite definite and distinct; that is, pain in the hip particularly, down the legs, in the small of the back. Hemorrhage is put down in most of the books as being pathognomic of cancer, or more so than of other obstructions; but I believe we do not find it that way except in the late stage. I believe hemorrhage is more common in hypertrophy, at least in the series of cases I have looked over, and I believe that has been found recently by others. Then I believe we should pay attention to the sacral fossa and to the glands—that is, any involvement of the glands with reference to cancer.

In the series of tabes that we have studied there have been four cases of tabes and prostatic hypertrophy associated, typically enlarged prostates and no general symptoms of tabes at all. Tabes was recognized by the bladder examination and by the rectal sphincter, and the rectal sphincter was the first thing to give us a clue. There were four cases. So you see it is very important to keep the rectal sphincter in mind.

In the examination of the bladder, the passage of the catheter is the first index to the amount of obstruction evidenced by residual urine. I do not know what the general experience has been, but it seems to me there are quite frequently three different types of catheterization. In tabes you usually have a spastic external sphincter and you immediately get urine—before you get into the region of the normal neck of the bladder you get urine. In prostatic cancer you

have obstruction usually well down and there is generally a feeling of resistance clear through the prostatic urethra; whereas in prostatic hypertrophy, particularly in the middle lobe, you get well in and then you hop over and get urine well back. So there are three different types of catheterization.

With reference to the one great important diagnostic feature, the cystoscope, I am not going to deal with the great importance it has because you all know it, but I do want to insist on the usage of the cystoscope before, particularly, any bladder operations, prostatectomy especially, because I find it is very infrequently done by men not engaged in urology. It is not infrequently the case that you have something running along with the hypertrophy; quite often we see stones, diverticuli, calculi of the bladder, papillomas, associated with benign hypertrophy; and cystoscopic examination will give us our only real means of determining the condition. Also we can tell the exact location of the lobes, whether there is a lobe or a contracture and no lobe, whether we have a papilloma obstructing the orifice, a urethral cyst, or what not. Then we know exactly what we are doing, and often can spare patients major surgery and do simple and satisfactory procedures which will restore them much more easily than would an open operation.

In women the cystoscope is very important. Obstruction to urination in women is exceedingly common. We find residual urine in women almost as commonly as in men—often not as high, but an ounce, two ounces of urine—not in cystitis, but in various vegetations, papillomas, other things of that sort, fibroids for instance. I have seen two cases of complete obstruction to urination in women from fibroids. I have seen another case of retention in a woman from tumor at the neck of the bladder.

The one great argument that the suprapubicists used to have was that they could always see their bladder at the operation and that cystoscopic examinations were not necessary; but cystoscopic examinations are necessary in suprapubic as well as in perineal work, particularly in the two-stage work, and you can usually see better with the cystoscope than you can with your unaided eye down a bladder. I believe I am not exaggerating in this. It is a strange thing to me that one of the large clinics of the country condemns the use of the cystoscope in diagnosing obstructions of the neck. If they find a good sized prostate and a clear urine, an uninfected urine, their golden rule, if I am speaking rightly, and I believe I am, is not to do a cystoscopic examination. If the urine is infected, they do a cystoscopic examination. Now, it has been my experience that the infected urine is much better for the prostatic than the noninfected urine. I think Cabot mentioned that some time ago—that a man who is immunized by his infection if he has a high residual urine is much better with an infected urine, because he is going to have it infected and then he will have his relief of pressure plus his infection because he is not used to it. So I cannot see why a big clinic of this type does not use the cystoscope as a routine when they are one of the cystoscopists of the country.

Dr. Blair has mentioned the specific gravity of the urine. I do not pay much attention to that point in these patients. Specific gravity plus total amount is all right; but specific gravity alone usually does not mean much. Specific gravity, total solids, and particularly tests with phthalein or whatever test seems indicated, preferably phthalein—that is, something to determine the functional capacity of the kidney—is certainly indicated more in obstructions at the neck, particularly prostatic obstructions, than in any other field in urology. The striking thing is that a man

may have a urine looking perfectly good, good specific gravity, good urea, and still be on the brink and ready to have a crumbling uremia if he were operated. That is, their urine is no index to the amount of damage their kidneys are suffering. That is where functional tests and analyses of urine and blood together have made such wonderful strides. I remember well two cases that were operated on with no suspicion of kidney damage—that was years ago; they seemed in perfectly good shape, they were used to their back pressure and when it was relieved they immediately crumbled, became uremic and died.

The next thing, of course, is the operation, after the other general features of the lungs, vascular system and nervous system. Most of these men have some cardiovascular processes, almost all of them have myocardial changes, arteriosclerosis, which usually does not mean so much if properly cared for; that is, you do not have to pay so much attention to their cardiac capacity as to their renal capacity. I had one sad illustration not long ago, however, of the fact that the heart may be the stumbling block, a patient on whom I had done one stage of a suprapubic suddenly turned over in bed and died.

But the great thing is, I should say, to appreciate uremia and incontinence, and to differentiate the three classes, inflammatory prostate, hypertrophied prostate and cancerous prostate, and to recognize tabes.

#### THE PRELIMINARY TREATMENT OF OBSTRUCTIONS AT THE VESICAL NECK.—

By DR. C. E. BURFORD.

By preliminary treatment we mean measures which anticipate the surgical procedure for the purpose of improving the final result, shortening the recovery or reducing the risk incident thereto.

For the past ten or fifteen years surgical literature and surgical clinics have abounded with arguments and discussions for and against certain technic for the relief of prostatic obstruction. Attention was fixed on the operation itself, and little thought was given the individual patient. It was a common thing in some of the best clinics for patients to be subjected to prostatectomy within twenty-four hours after their introduction.

About all that was determined in some cases was the presence, or, as we have all seen at operation, the apparent absence of the coveted gland, and even a cystoscopic examination was thought to be the occasion of fatal delay, especially when the patient was acquainted with another surgeon. The fact that many of these patients survived to meet the surgeon frequently and trouble his esthetic sense with the odor of urine which dribbled into their clothing, or spoil his chances for operating on some of their friends by tales of recto-urethral fistulae and loss of sexual power, caused the surgeon to hesitate and examine his cases more carefully.

An occasional death following prostatectomy in cases which appear to be good risks caused more careful study and preparation of the next case, until there has come to be a well recognized and more or less elaborate routine of examination and extensive course of treatment or preparation requiring from a few days to a few months.

Since practically all surgical procedures for relief of obstruction at the vesical neck require constant drainage following the operation, either by retained catheter, suprapubic or perineal drainage tube or by an open bladder wound, the preliminary treatment should prepare the patient to withstand the sudden change from a constantly full or distended bladder, frequently accompanied with back pressure into the



kidneys, to a collapsed and empty bladder and no back pressure into the kidneys.

This can be accomplished by frequent catheterizations, which are apt to irritate the urethra, or better, by a soft catheter retained in the urethra for constant drainage, or by what has proven to be the most satisfactory of all, the preliminary cystotomy or the first stage of the two-stage operation. This is indicated more particularly in cases having a large amount of residual urine, marked cystitis, threatened uremia, low resistance, or extremely high blood pressure. There is no question but that the retained or indwelling catheter accomplishes a great deal for many cases, but it is by no means a substitute for the preliminary cystotomy. I must admit that when cystotomy was first advocated as a preliminary to prostatectomy I argued that everything could be done for the patient by the indwelling catheter that could be done by cystotomy, but trying the procedure on proper cases for three years has thoroughly convinced me that if cystotomy as a preliminary procedure to prostatectomy were done in a larger per cent. of cases the mortality of prostatectomy would be reduced to one half of its present percentage.

It accomplishes much more than mere relief of retention and back pressure. It is a very simple procedure when done under local anesthesia, and enables the surgeon to have a suprapubic wound well walled off by lymph and practically immune to infection and to sloughing of the abdominal fat before the added shock of prostatectomy is undertaken. Surely all surgeons have had the experience of doing a prostatectomy accompanied by very little loss of blood and slight shock, but from about the third to the seventh day having to contend with a period of depression affecting the circulation, digestion and excretion, becoming critical in some cases. The cystotomy enables the patient to pass through this period of depression in a milder form before the prostatectomy is undertaken. Cabot has lengthened this period between the cystotomy and the prostatectomy as much as several months in desperate cases and believes that by this method alone he was enabled to save life.

If the patient's bladder is infected an attempt should be made by antiseptic irrigations, elimination of an irritating diet, general hygienic measures and proper bowel activity, to get rid of the infection before operation. It is at this point that it seems well to call a halt on the too active and indiscriminate use of urotropin, cystogen, hexamethylenetetramine, and kindred drugs depending for their benefit on the elimination of formalin by the urine. There are certain well established facts concerning this group of drugs:

1. Their usefulness in many cases.
2. Their uselessness in the presence of alkaline urine.
3. Their ability to cause acute hemorrhagic nephritis in certain cases, even in moderate dosage, the predetermination of which cases is impossible.
4. Their irritating effect on the mucous membrane of the trigone and prostatic urethra.

There seems to be much less chance of suppression following prostatectomy if the kidneys are very active at the time of operation. This is usually accomplished by having the patient drink large quantities of water for several days, reinforced in some cases by proctoclysis provided the blood pressure is not too high. Activity of the skin is encouraged by warm bathing and proper brushing or massage.

The treatment of the intestinal tract differs so widely in various cases that it is hard to do more than make suggestions as to the proper preparation. Some old men have established what is to them a physiologic condition of a bowel movement every second,

third or fourth day, and obviously should not be subjected to the same treatment as those who have three bowel movements every weekday and four on Sunday. Castor oil seems to prepare more intestinal tracts for operation than any other cathartic, and in debilitated old men especially should be given long enough before the operation to permit the patient to have one light meal after its administration, otherwise the patient comes to the operating table very much weakened with the prospect of starvation for from one to three days or even longer if he takes an ether anesthesia.

If the blood pressure is excessively high, say 200 or 225 mm. mercury, systolic, it is much safer to carry out certain measures for a slow and moderate reduction extending over several days, by catharsis, administration of alkalis, if there are signs of acidosis, and forbidding all irritants and stimulants by mouth, and having the patient carefully guarded against all excitement and worry if possible. The study and preliminary treatment of both the circulatory and respiratory systems of these old men is often a problem all too great for both the internist and urologist and the cooperation of these two men has benefited the patient most.

There is no standard of function of the kidneys to which an individual case must be lifted before operation. The highest point of efficiency that may be attained with the patient's kidneys is sometimes too low and the lowest ebb of secretion is sometimes sufficient to tide them through the crisis, so that judgment must be used as to the relative dangers, or delaying operation for further preparation, or of meeting the more immediate danger of insufficient kidney function.

I have purposely reserved until the last the treatment of some special features which are probably disregarded by many operators even today. I plead for a careful study and careful consideration of the mental attitude and general nervous makeup, including the peculiarities of habits, the ability and willingness to stand confinement in a hospital and in bed. A man who has lived 65 or 75 years is usually firmly fixed in his habits and routine of living and cannot change either without doing violence to his nervous system. Frequently the noise of street cars and street traffic will keep the old man from the country awake night after night at a time when sleep is his only salvation. Old men frequently become frantic with nervousness when they are denied the stimulation of their usual smoke or chew of tobacco. Far be it from me to advocate the use of tobacco or the daily highball as preliminary treatment of obstruction at the vesical neck, but these so-called habits cannot be disregarded in old people as in those of the versatile age.

About two years ago a man of 73 years came to me for prostatectomy from a small country town and was sent to the hospital for preliminary treatment and observation. After a few absolutely sleepless nights the patient begged in a pleading voice to be sent home. His request was granted, hoping that at some future time he might become reconciled to hospital life and a change of beds, but another visit to the city resulted much the same and I am thoroughly convinced that the confinement necessary to a prostatectomy would result fatally in his case, although I had operated successfully on his brother for the same condition a year prior to his first visit, but the brother was a man of quiet disposition having good self-control.

The importance of preliminary treatment might be stated in a short sentence:

It is my belief that, given careful preliminary treatment coupled with careful and competent after-treatment, the patient's chances for recovery and good results are better with an *ordinary, amateurish* operation than with an expert operation and poor treatment.

# TREATMENT OF OBSTRUCTIONS OF THE VESICAL NECK.—By DR. W. M. ROBERTSON.

Treatment of obstructions of the vesical neck begins with the diagnosis. If we can assure ourselves of the exact pathologic condition present, the various procedures for its correction have become standardized to such an extent that in the vast majority of cases we may feel certain of a fairly satisfactory result.

Many disasters which have followed surgical interference in these conditions have been due to the presence of unrecognized central nerve lesions. All of us have seen unfortunate tabetics who have had their prostates removed and have been left with urinary incontinence, complicated at times by a perineal fistula.

Fortunately these cases are becoming more rare, which would seem to indicate a decrease in the pernicious activity of the general surgeon.

The next and perhaps most important step in the treatment consists in the preliminary preparation of the patient. These patients are not as a rule the best surgical risks and it is the appreciation of this fact and the recognition of the necessity of getting them into the best possible condition that has contributed most in reducing the mortality of prostatectomy from 40 per cent. to approximately 4 per cent.

Time does not permit consideration of the treatment of all the conditions causing obstruction of the vesical neck. Congenital constriction, calculus, acute inflammations, neoplasms, disease of the seminal vesicles, verumontanum, etc., must first be detected and then treated according to well recognized principles.

The most difficult cases we are called on to treat are those patients who present typical characteristic symptoms of prostatism without an easily demonstrable pathologic lesion. In the absence of a central nerve lesion, the cause is to be found in an obstruction at the vesical orifice, sometimes so slight as to be detected only by palpation of the orifice through the open bladder. This obstruction is due to a median bar, contractures of the vesical outlet, or minute periurethral adenomata.

There is no doubt as to the existence of a median bar and there is no doubt as to the efficacy of the Young's punch operation, but both the diagnosis and the operation have been sadly abused. Many patients have been accused of having a slight median bar, because nothing could be found to account for their symptoms, and many others with inflamed and congested prostates which could have been cured by simple treatment have been "punched" and consequently subjected to great risk. The operation appeals to the patient because it is not a cutting one, but it is not devoid of danger, the chief of which is hemorrhage.

I have had no experience with Chetwood's electrocautery operation through a perineal incision for the relief of contracture. I believe that both this condition and the median bar can, generally speaking, be better dealt with by the suprapubic approach which brings the whole interior of the bladder into direct view. With the bladder open the obstruction can be removed with the electric cautery, the contracture, if present, incised in one or more places, or dilated, or a wedge-shaped piece removed. There is no danger of hemorrhage or later infection, and by palpating with a finger in the rectum and a finger in the bladder or the posterior urethra one can be sure of the complete removal of the obstruction.

Good results have been reported in this class of cases by treatment with the high frequency current. I have had no experience with this method of treatment.

Another difficult condition to deal with is the small, adherent, sclerotic prostate. Rectal examination shows its size to be about normal or perhaps atrophic, and

we have to depend largely on the cystoscopic findings for a diagnosis. Its removal is most difficult and it is in these cases that the perineal operation is supposed to possess distinct advantages. It seems to me that the technical difficulties in either route are about equal and that the operator would do well to adhere to the method with which he is most familiar.

On account of being able to more thoroughly remove the dense fibrous tissue which surrounds the vesical neck causing a relative stenosis and elevation of the urethral orifice, it is probable that the functional results obtained by the high operation are more satisfactory.

By far the largest group of cases, and on account of its prevalence the most important clinically, is the prostatic adenoma, or what is generally known as prostatic hypertrophy, where the prostate is felt per rectum to be enlarged and which includes all cases of bilateral, unilateral and median lobe enlargements.

For the relief of the condition, I am uncompromisingly in favor of suprapubic prostatectomy. The operation is simple, easily and quickly performed, free from complications and bad after-effects and the patients get well. It is the operation par excellence in desperate cases, where the patients are bad surgical risks, on account of being able to perform it in two stages.

I do not doubt that in a fair proportion of cases the preliminary bladder drainage can be carried out by systematic catheterization, or the retained catheter, but in all badly infected cases, and in certain others where there is difficulty in introducing the catheter and the retention catheter is not well borne, we must resort to suprapubic drainage. The preliminary cystotomy can always be done under local anesthesia and whether done under local or general anesthesia shock is considerable, generally much more marked than that following the later removal of the gland. Generally speaking, the patient who survives the primary operation may safely look forward to a successful outcome of the prostatectomy.

When it comes to a question of the secondary operation let us consider what we have gained. The kidneys have been relieved from the effects of back pressure and ascending infection; the bladder has been cleansed, and the blood vessels are no longer congested; the prostate is no longer inflamed, but is contracted, and the patient is free from toxemia due to septic absorption; the prevesical space is obliterated and we have a sinus covered with granulations leading from the skin to the cavity of the bladder; the peritoneum is well out of harm's way and the danger of infection is reduced to a minimum.

The nucleation of the gland is carried out preferably under gas-oxygen anesthesia. The sinus leading into the bladder is dilated, the index finger is inserted into the prostatic urethra up to the first joint, the point of the finger is then bent and plunged through the mucous membrane of the roof of the urethra, where the lateral lobes lie in apposition. The finger at once finds the line of cleavage, and travels on without much opposition, freeing first one lobe and then the other, finally delivering the entire prostate into the cavity of the bladder, after which the urethra is severed and the entire gland removed en masse.

A large Freyer's tube is inserted into the bladder, one or two sutures are inserted through skin, fascia and muscles above and below the tube, a small gauze drain is placed in the prevesical space, and the patient returned to bed as soon as possible.

## ANESTHESIA.—By DR. BRANSFORD LEWIS.

The chief interest in regard to anesthesia is in relation to mortality, and I believe that in reality the mortality of prostatectomy is largely connected with the subject of anesthesia



We will leave out of our calculations chloroform, because of its danger. Gas-oxygen anesthesia has proved dangerous in the hands of some and exceedingly satisfactory in the hands of others so it seems that the safety or danger connected with gas-oxygen anesthesia depends on the expertness with which it is given. In Dr. Crile's clinic a tremendous number of operations are carried through with the gas-oxygen anesthesia and the mortality is exceedingly low. On the other hand, where it is not given by an expert the mortality has proved very considerable. Spinal anesthesia I consider to be the most dangerous of all modes of anesthesia used for prostatectomy, and I am acquainted with about 67 cases of death from spinal anesthesia in connection with prostatic surgery. From that standpoint alone, although it is accepted by a number of men, I myself would not do the spinal anesthesia in prostatectomy any more and have cast it aside for several years.

Anesthesia by means of the injection of ether in oil in the rectum gave some promise of being satisfactory and where it was carried out properly it seemed in certain cases quite satisfactory, but I think there are definite objections in regard to it, for instance, the slowness. I witnessed a Chicago surgeon who wished to administer it and it took him fifty minutes to get the patient under even a moderate degree of anesthesia and then the patient had to have some ether in addition to send him off. So a certain unreliability and slowness of the rectal injection of ether in oil will, I believe, throw it out of our calculations.

The injection of paraldehyde into the vein was also brought forward a few years ago in the *Annals of Surgery*, and it was tried out. That also proved uncertain. If you get it in, you cannot get it out; and if you get in too much, you have an embarrassing situation to deal with. In certain cases it was successful and in others it was a failure. Dr. Cale tried it on several cases and was at first favorably impressed, but I believe he has changed his opinion on the subject.

The old, reliable ether is, I believe, in most cases the thing to use. It was formerly considered more dangerous than it is at the present time, and I believe that change of opinion has come about largely through the influence for better of the preliminary treatment. Cases can be conducted through prostatectomy now under ether anesthesia on account of the preparatory treatment that is instituted that formerly would have been very grave risks.

Nevertheless, there are certain cases where, even though this preparatory treatment is carried out to its utmost, a general anesthetic would prove dangerous, conditions referable to the lungs, the kidneys, and cardiac conditions. In such cases various forms of local anesthesia have been offered as substitutes for even the ether anesthesia which is considered now so much more innocuous than it used to be considered. One can get through the bladder by local infiltration anesthetic without much difficulty and without much suffering on the part of the patient. Then the effect on the prostate has been aimed at through other modes of local injection, local anesthesia. Allen, of New Orleans, has injected directly into the sheath of the prostate and has claimed that operations were done with a fair degree of comfort—I believe more to the operator than to the patient. I believe it is a very difficult thing to secure insensibility of the prostate by local injection. I have tried it to some extent and the descriptions of those operators who have tried it thoroughly are not enthusiastic, although they say they can do it.

In the line of endeavor to secure a method by which prostatectomies could be done in various operations without adding to the danger of the operation from the standpoint of anesthesia, we brought out the caudal anesthesia. The results have been already good. Like other modes of local anesthesia, it proved successful in a large proportion of cases and a failure in some.

#### POSTOPERATIVE CARE.—By DR. H. McCURE YOUNG.

We are all agreed as to the importance of the post-operative treatment. Dr. Burford stated, and I think most of us will agree with him, that the surgeon who does only a moderately good operation but is successful in his preliminary and after-treatment will get better results than the brilliant surgeon who blunders with the after-treatment.

These patients need care against two things; first, against uremia; second, against infection. Probably the greatest danger connected with prostatectomy is infection; in suprapubic prostatectomy the greatest danger is infection of the fat in the suprapubic space. To combat uremia the most important thing is the administration of large quantities of water. These patients as soon as they are taken from the operating room should be given hypodermoclysis, that is, a proctoclysis, and in many cases hypodermoclysis. Urotropin should be given at once. I believe that in some cases it is well to put urotropin even in the first water that is given by proctoclysis, because one must remember that one cannot expect them to take water by mouth at once. As soon as they are able to take water by mouth, they are given water in large quantities and are given urotropin with it. It has been my habit to combine sodium benzoate. I have given as much as 90 grains of urotropin, when a patient has fever, in twenty-four hours and have never seen that do harm in these patients who are getting large quantities of water.

In the perineal operation, the tube is left in for a period of twenty-four to thirty-six hours and should then be removed and the patient gotten out of bed as early as possible, probably the third day; and the patient may be kept out of bed even if he has a little fever, although the pulse must be watched. If the temperature goes over 102 F. I do not think it is well to get the patient out of bed.

I have not attempted to prepare an exhaustive paper on the subject of the after-treatment, for these points that I have gone over are, of course, familiar to all of you, but there are a few things that I thought might be of interest which have come up in my own practice and a few little instruments that I thought might also be of interest.

It has impressed me that in regard to the subject of uremia the textbooks say considerable about hiccough and advise medicines such as chloroform, etc., for the hiccough. If the patient suffers persistent vomiting and hiccough I believe it is better practice to wash out the stomach than it is to resort to those remedies which, while they may allay the hiccough, certainly irritate the kidneys. As a rule, the hiccough will stop if the stomach has been washed out. In one case I put a patient in a hot pack, although his temperature was above 100, an ordinary, moist hot pack, for a period of fifteen minutes; he was then taken out, sponged with alcohol, and went to sleep. Even though the patient is in desperate uremic condition, I believe it will do him no harm and it promotes sleep. I have also used dry cups over the kidneys, where I feared that the kidneys were not acting well, and that is a measure which is very simple, is not painful, and prevents congestion over the kidneys. I think the patient should not be allowed to lie constantly on his back, but should be turned over in order to prevent congestion over the kidneys.

We will say that the patient has passed through the first week without any mishap. He still requires the greatest degree of care. The passage of instruments through the urethra is something that we all approach with considerable trepidation after prostatectomy; if it is done too early our patient may have a chill and may develop epididymitis, metastatic abscesses, etc.

At the same time, sooner or later it has to be done and we have to be certain that there is a wide canal and that the patient completely empties his bladder. If there has been no fever or other complication at the end of three weeks, at the most a month, a catheter may be passed into the bladder to make sure that the patient has no residual urine. During the second month it has been my practice to dilate the deep urethra with a Coleman dilator. If there have been no complications this may be put off as late as the third month but I have always done it; we ought to make sure that the deep urethra can be dilated and that we get a smooth, soft, velvety mucous membrane in the deep urethra. Even in cases where the patient had a slight incontinence this dilation does no harm. It does not permanently render the opening more patulous, but rather the contrary, because it expels any infiltration there may be in the mucous membrane and renders it more pliable.

A fistula in this late stage is often troublesome. I have here a little instrument, lent me by Dr. Caulk to show you. It looks very much like a corkscrew. It can be passed along the fistulous tract into the perineum and then drawn out and it will bring with it the tough lining of the fistula and freshen it and thus permit it to heal. In dealing with a fistula, of course the problem is to freshen the edges at the internal orifice. There is no particular object in curetting the external edge of the fistula. Even if you get in three-fourths of the way and freshen, if you still leave the last quarter, the quarter that comes directly down from the urethra, it is not going to heal, because the urine will come down that upper quarter and flow down the fistula. So you have to close the fistula at its upper end. This instrument can be passed up and will scrape it down all the way.

I have brought something that I have used in a fistula case that troubled me. I think this fistula had closed. I went away on my summer vacation. When I returned two or three weeks later—the patient must have been out of the hospital for at least two months—he returned complaining that he still leaked. Careful examination showed that there was a very fine, hairlike opening that urine occasionally came through. In exploring with the probe, I found the probe would go clear up to the urethra. I filled the bladder with normal saline solution and then passed a sound to the bladder, and then passed this little cannula, hollow all the way down, through the fistulous tract until it came into contact with the sound. The sound was then withdrawn and a 50 per cent. solution of silver nitrate injected through the cannula by means of a Record syringe which exactly fits into it and just a few drops deposited outside the urethra. Of course, the presence of the normal saline solution insures against doing any great amount of damage with the silver nitrate solution, because anything which flows through the deep urethra is going to be precipitated by the normal saline solution in the bladder. You use only a few drops, then withdraw a little way and as it comes out you inject a little more. That case healed up under the treatment.

Another thing I have had happen after prostatectomy when the patient had been up as much as two months he still had some residual urine, even in spite of dilation. I remember one case where while his residual urine ordinarily was negligible he suddenly developed a retention of urine although he had not suffered from any such symptoms before. I thought it was simply a passing thing, catheterized him and assured him it would not occur again. The next day he returned, saying it had occurred again. So I cystoscoped him at once and found just a little tag of mucous membrane right at the vesical orifice. Of course, we do not sew these things up; no surgeon

can know when he takes out a prostate just what kind of an internal orifice he will get when the healing process is complete, and he may very easily leave a little tag of mucous membrane which will subsequently give trouble. I have with me the instrument with which I attacked this thing. I do not think it has been much used in St. Louis. This is a Brasch punch. It is the same thing as the Lewis punch with the difference that it has a light at the far end and it has an irrigating attachment. This is put into the bladder, the obturator taken out, the light turned on, and as you draw it out you simply turn it around at the sphincter margin and see anything that is in there. As soon as you see something that you wish to bite off, you simply pass down this one blade of the punch, then pull it out until you have it located and then you pass down this blade which bites it off. You can see just what you are doing and you can take off just a little piece. The little piece of mucous membrane which obstructed in this case I bit off in my office and the patient has never had any trouble since.

#### DISCUSSION

DR. V. P. BLAIR: There are two things which are of interest to me. I saw lately a man with a large prostate who had had two months' drainage and I thought it could be shelled out easily. I thought Dr. Fischel would do it but he left it to me. I knew something of the anatomy of that patient and I have pretty long fingers. I worked for thirty minutes, under gas, trying to get that thing out. It was without any cleavage and it had to be dug out solid. It did not seem to hurt him much. He went upstairs to his room and about twenty or thirty minutes later I looked in. He did not look good, though his pulse was very good. I sent for a blood pressure apparatus, and by the time it came we could not register any pressure at all and he seemed to be dying. We pulled him up very quickly by putting eight minims of adrenalin in his vein; I am sure if we had not that man would have died. In twenty-four hours he was in pretty good shape again. There was no hemorrhage.

Now as to the peritoneum, there are a number of ways in which the peritoneum can be very much in the way at the second operation. It occurred to us, and we have tried to follow it out in drainage, to put the drainage tube at the preliminary operation in the upper part of the wound. In that way you can put a bistoury in and cut down pretty safely toward the pubes as far as you wish.

DR. H. S. MCKAY: In the few prostatectomies I have done I have seen one or two that it seemed to me were pretty hard to get into a proper line of cleavage. I have seen one recently which proved later to be an adenocarcinoma, and that may have been the reason why I was unable to find the line of cleavage readily in that case. In my own experience I have seen several cases in which I could not get into that sheath as readily as Dr. Robertson would have us believe should be the case. It may have been my inability rather than the fact that the line of cleavage was not there.

DR. CAULK, closing: I will say with reference to the operation that I have done perineals entirely, but last spring I caught the two-stage epidemic and began doing them all two-stage, and really it is a simply wonderful prostatectomy. On the other hand, I have seen things following in the convalescence of the two-stage operation which I have not seen after the perineal. I grant that the perineal is hard, it is more difficult, and the only reason at all that I went up above was that I could not say anything against it when I really did not know it.

Incontinence I do not believe you see after perineals,



but I have seen three postoperative uremics with the two-stage operation. I have operated in some pretty tough risks in the two-stage and they did wonderfully, but this postoperative uremia has impressed me. They did well with their first stage operation. Dr. Robertson says if they get through the first stage there is no trouble with the second, but these cases drained nicely for two weeks, phthalein was good, everything fine after the second operation, which lasted not over three minutes, yet on the third day they began to have drowsiness, hiccough, etc. We had quite a fight to bring them around. It might have happened with the perineal, although we were bragging that it was the first postoperative uremia we had seen. I did a perineal this morning and I admit that it was a whole lot harder, but I believe the patient is going to get well.

I have noticed in the two-stage operation, and would like to know what observation the rest of you have made, that in the shad-bellied men, the thin abdominal-walled men, there is more trouble in getting fistulas to heal suprapubically than in other men. Usually it is much easier to put in your tube with the thin wall under local anesthesia, when with the bladder full and the patient conscious the bladder jumps right up and you do not have to hunt for it, and we have not been bothered with the peritoneum; but those are the very cases, when we have done it high on the abdominal wall, that are the most stubborn ones to heal.

DR. LEWIS, in closing: Dr. Caulk made a point of four specifications in regard to diagnosis. I think he ought to add one more, and that is to specially look for and identify contracture at the vesical neck. This contracture is just as important a pathologic entity as any of the others. I have here an interesting Roentgen-ray picture in which there was a contracture at the vesical neck and also a diverticulum. The cavity and the diverticulum are both shown. We operated on that case. When we operated we found a ring of tissue that probably contributed to the development of the diverticulum.

One thing that ought to be seriously considered among us and among the general profession is going out of town, operating on a case, and coming back on the evening train. I think it is a horrible thing to do, in that you sacrifice all possibility of giving preliminary treatment, which we all recognize as being so essential, and the patient is turned over for after treatment to one who is not familiar with the after conduct of these cases. From every standpoint I believe you sacrifice the interest of the patient by such hurried proceedings, and I believe it ought to be combatted.

With respect to the biting and punching operations, I have not done that much. I have heard them recommended and I have also heard of the danger of hemorrhage following. Several men have told me that Dr. Young himself has to sit up all night to staunch such hemorrhages, that he has had to open the bladder suprapubically to staunch hemorrhage. That is the prime reason why I think another method should be followed and the reason why I have been working on this fulguration method of attack for the contracture. Dr. McClure Young, I know, had a little blade that he used with heat. That was very good, but I have been attacking the subject from the standpoint of fulguration, which is less liable to make extensive cauterization, applying the effect right where you want it. So far, I am well pleased with it.

The lack of cleavage that Dr. Blair speaks of I have seen. They are not always as easy as Dr. Robertson describes. In the difficult cases I have used a knife which cuts on the inside and makes a definite incision along each side of the prostatic mucosa. This blade, with which I use the cauterization high-frequency, is flexible and can follow the tortuous channel of the

cystoscope. While you are looking in, you can place it where you wish.

DR. ROBERTSON, in closing: I have nothing to add except in regard to Dr. Lewis' instrument. You put the blade in and cut on the side. Now, that is just what I do not do, and that is why Dr. Blair has trouble; he does not go after it right. In the prostate you have two lobes, sometimes a third or median lobe below. Now you go up above till the median lobe is met and there is no prostatic tissue, generally speaking, between those. Now if these two lobes are enlarged the mucous membrane above is stretched thin. You do not need anything to cut with; all you need to do is to stick your finger up there. If you cannot do so it is not the operation's fault; it is the patient's fault.

DR. BLAIR: In this case that I spoke of it was necessary to take a pair of scissors; that dissection every bit of it had to be torn.

DR. ROBERTSON: That was cancer.

DR. YOUNG, in closing: That instrument of Dr. Lewis' interested me a good deal. I devised a little galvanocautery that could be used through the cystoscope. The difference between galvanocautery and high frequency cautery would be simply a question of which technically is the easier to use and which is the more reliable instrument. The galvanocautery is perfectly reliable except for one thing; that is, if you overheat your blade, are not very careful with it, you may burn it out—it will melt. As you work, as soon as your blade is in contact with tissues you have to use considerable electricity to keep it red and if a little bleb of tissue collects around it it is very likely to melt. This instrument Dr. Lewis has devised would, I suppose, be free from that fault. There might be other technical difficulties discovered in use. I suppose it would require a very heavy current to heat such an electrode as that. As you know the D'Arsonval current, if you put it through a sound to insulate it, can be used in treatment in the urethra. And such electrodes are on the market. But the only way to get a fulgurating effect with the D'Arsonval current is to bring it to a point as we do with our fulgurating wires. Dr. Kolischer of Chicago has a tremendously heavy D'Arsonval machine. The apparatus costs about \$800. With that you can fry a beefsteak and I have seen him do it; putting an electrode at one end, it will cook around that electrode for a distance of half an inch. If you have a sufficiently heavy current, you can burn as deeply as with the galvanocautery.

Feb. 21, 1917

EXHIBITION OF PATIENT.—By DR. ERNST JONAS.

I brought this patient here especially because this subject has never been discussed before the club, to my knowledge at least. This lady, who is 38 or 39 years old, has had five children, of whom three are living. Two years ago she noticed that off and on, without any inconvenience otherwise to herself, some discharge came from the left nipple. At first the discharge was fairly clear, of serous nature. Later she noticed sometimes a bloody discoloration. She had no pain, no inconvenience, until two months ago when she noticed at one time a little swelling under the left nipple and more profuse discharge.

I could not make out a distinct tumor at the time I saw her; but that is rather significant for as a rule you cannot. At her first visit to the office there was a little oozing of a brownish, serohemorrhagic fluid; later it came out in quite a little stream. She says that when she expresses the fluid it is at first clear, but later it becomes brownish. Underneath the nipple

is supposed to be the most frequent location of this trouble. In this case there is especial resistance in this locality, most likely some little papillomatous tumor which has connection with the milk ducts and then discharges. The fluid is somewhat sticky. I would like your advice as to whether it would be best to leave the patient alone or subject her to some surgical procedure.

My reason for demonstrating the patient is that there does not seem to be any uniformity of opinion on the subject in the literature. Bloodgood divides these cases into three classes. In those where there is bloody discharge with tumor he advises removal of the tumor by plastic operation, since those tumors are almost always benign and if it should be found at operation to be malignant, which he says can almost always be determined, we can still do a radical operation. Secondly, cases of bloody discharge without evidence of tumor. In those cases, he says, in which he operated he always found the tumor, a small, intracanalicular cystic, papillomatous tumor; and thirdly, in those cases in which he did not operate no harm was done except in one case where after fifteen years a small tumor appeared, which he removed. So he advocates leaving these conditions alone unless tumor is evident. If the tumor is evident, then he says plastic operation should be done. As far as the latter statement is concerned, I believe if the tumor is evident I would prefer complete removal of the breast. He may have such confidence in his judgment that he feels quite sure he can say whether the growth is benign or malignant. I feel the tumor is benign. This belief is confirmed by the report of the pathologist.

#### EXHIBITION OF PATIENTS.—By DR. MAJOR G.

SEELIG.

This is a patient after operation on the nose for rhinophyma. He sought operation largely because the growth became so extensive and so soft that at night it flopped down over his nostrils interfering with breathing. The operation consisted merely in plastic work, shaving off of the nose and moulding the alae as far as we could judge it to be proper, making due allowance for future cicatrization. The only precaution to observe, as far as I can make out, is to leave intact the marginal rim of skin about the alae, because if that is shaved off cicatrization would give a deformity of the external nasal apertures. The hemorrhage was at first profuse, but yielded to simple packing. It is not skin-grafted, simply allowed to heal.

The second patient was here about a year and a half ago with a typical thyroglossal duct. I did the typical operation and had dissected the duct all the way up to the hyoid bone, when, to my chagrin, it broke off flush with the hyoid. Dr. Hagler, who was helping me, felt that we had got to the end of it, although I thought it broke off. I could not find any more of it, and sent the boy home. He showed up about a year later with a suppurating thyroglossal duct cyst. I was at a loss what to do. I thought of injecting the cyst with a very strong solution of methylene blue in the hope that it would enable me to trace the rest of the duct. I injected the solution. The patient expectorated blue saliva, thus demonstrating that we had to deal with a complete thyroglossal duct fistula. I decided then that it was hopeless to try to trace the tract through the muscles of the floor of the mouth and determined I would go in, find it if I could and, at any rate, resect the body of the hyoid bone. I have not seen this described anywhere. I did find a piece of blue substance, no larger than a lentil, which on microscopic examination showed typical thyroglossal duct mucous membrane. I resected the body of the hyoid bone, with the idea that then I would not have

more than an inch of thyroglossal duct left and that it could empty through the foremen cecum. It has worked out; but whether it would do so every time, I do not know.

#### EXHIBITION OF SPECIMENS.—By DR. MAJOR G. SEELIG.

Dr. Hyndman has asked me to show these specimens while I am on my feet. The first represents a very much larger thyroid than it seems to be here. I took it out about a week ago. It is a pronounced colloid goiter with very marked adenomatous nodules. You find here and there large adenomatous tumors that stuck out of the neck like walnuts. The boy is only 16 years old. It is the youngest patient on whom I have operated for goiter.

This specimen illustrates the dangers of cystic duct impaction. The gallbladder was a gangrenous one, the case being operated on here about ten days ago. The woman came in very sick, having had a chill a short time before, pulse about 160; patient very obese, with a spreading purulent peritonitis and a gangrenous gallbladder. After the gallbladder was removed and the abdomen partially sewed up, Dr. Newman opened the gallbladder and reported there was nothing in it, which left me in quite a quandary as to what to do. I decided, as the woman was in such bad shape, to get through and do a secondary operation later if necessary. After finishing the abdominal closure, I examined the gallbladder and turned out a completely impacted cystic duct stone, completely impacted in the mucosa, which was gangrenous, so that it practically came out by itself after I incised the edematous mucosa. Now here is the gallbladder and that condition was produced by the impaction of a small, perfectly innocent-looking stone.

#### EXHIBITION OF PATIENTS.—By DR. WILLIAM G. ROBERTSON.

I have spoken several times of the two-stage operation for suprapubic prostatectomy. The patient whom I show tonight was operated on a week ago today. He came in December 16 with almost complete retention of urine. We began systematically catheterizing him and the more we catheterized him the worse he got; that is, catheterization was more difficult and general condition grew worse and the amount of urine that he could pass grew less. So about five or six days after he had been in he had a complete retention and catheterization was very difficult and followed by a great deal of bleeding. On the 27th of December we did a suprapubic opening under local anesthesia. We found about 30 small stones, from the size of a pea to that of a bean, one reason, perhaps, for so much pain after catheterization. We took the stones out and put a drain in. About three weeks after that he had considerable elevation of temperature, which went to 102 F., uremic symptoms developed; he was very irritable and sick for a few days. Then he began to improve and in a couple of weeks got into a condition where we thought we could complete the operation, and by the time we got the consent of the family it was fully a month after. I have frequently found that at about that time after operation the necrosis begins to separate around the tube and you get some septic absorption and temperature; and he got that, a temperature running to 104 F., but he finally began to improve and got into a good condition. A week ago this morning we took out the prostate.

The point is that following the prostatectomy there is absolutely no reaction, no shock. The man was in as good condition the day after operation, was out of bed the following day, on Monday was about the



ward, and now is walking about as usual in perfectly good condition and perfectly happy.

Another thing I wished to show is the condition of the suprapubic wound. This is the end of a week. You do not expect a suprapubic wound at the end of a week, when you have taken out so much tissue, to look good, and you all know that after the primary operation, at the end of a week, you would be looking for some fat necrosis or something of that kind. For that reason, I wished to show the wound following the two-stage operation.

This other patient came in last summer. I have here some Roentgen rays of the case. There were incrustations in the urethra and bladder stones you might say. There was a solid mass of stone formation extending from the bladder all through the urethral canal to the meatus and projecting behind the meatus. Nothing could be got into the urethra. The canal was completely blocked, and he had retention of urine. We took a little of the stone out and then he got a little dribbling. I curetted and passed instruments a little way. I could not get a sound or an endoscope in because the urethra was like a lead tube, quite without resiliency. The patient was in miserable condition. I did not know what to do with him. The picture shows quite a mass in the bladder and a little shadow in the right kidney. There was absolutely no question of doing anything through the urethra. I thought of making a suprapubic opening and draining from above.

In the midst of my troubles I met Dr. Seelig, who said to me, "Why don't you try the Bulgarian bacillus?" I said, "I don't think it would do any good." "I do not either," he said, "but why don't you try it?" So I tried it, and much to my surprise inside of two days the urethra was fairly free and five days after it was perfectly free.

We still had this mass which we could feel through the rectum. The patient continued to pass a certain amount of this stuff; it would come out in particles half the size of the nail of the little finger. It would be painful; every now and then one would lodge in the urethra and we would introduce a sound and work it out. That procedure became very tiresome to him, so at about the end of a month I made a suprapubic opening, and instead of finding a mass of hard, stony substance in the bladder there was not on either side, I should say, altogether half a teaspoonful—on either side of a gelatinous mass. We scooped that out. The patient recovered. Before the patient went out, the suprapubic wound opened again and for some reason or other we have not got it closed. Incidentally, whether due to drainage or what I do not know, the shadow in the kidney has disappeared; whether the shadow was due to incrustations or to accident, we cannot tell.

#### DISCUSSION

DR. H. TUHOLSKE: Dr. Robertson was incorrect in his description of the urethra in the second case. He described it as being like a lead tube. I should say that it felt like a tessellated floor with mosaic pieces inlaid. That was the condition all through the urethra into the bladder. When I felt it first, I was not at all sure what the condition was; I knew I had never felt anything like it before.

DR. M. G. SEELIG: I just wanted to add a word about the first patient. The old gentleman was out here about eight years ago with one of the worst cases of trifacial neuralgia that I have ever seen, a perfectly classic case. He would go into one spasm of pain after another and the whole face became contorted. At that time he got an alcohol injection and has been perfectly free from the trouble ever since.

DR. FRED TAUSSIG: I would like to mention briefly

the fact that I had a similar case of incrustated stones in a woman about three years ago that has caused me much concern. I did not make the diagnosis before operation, thinking it to be a polypoid cystitis. I opened the bladder and resected a piece of this polypoid tumor which I thought was possibly papillomatous. At the time of opening the bladder a good deal of this calcareous material emptied itself from the bladder and on account of the chronic cystitis I drained through the vesicovaginal incision. The microscopic examination showed no evidence of papilloma but a simple incrustation cystitis, showing the calcareous deposits in the mucosa itself. The fistula remained open and the cystitis persisted. I tried the Bulgarian bacillus, injected into the bladder, with absolutely no effect except that it seemed to produce an exacerbation of the cystitis and, at the same time, a pronounced vaginitis appeared which the patient had not had previously. I then returned to the ordinary silver nitrate instillations with irrigation, and gradually the bladder condition cleared up. I was also giving hexamethylenamin. However, my attempt at closing the vesicovaginal fistula, made about a month ago, has yielded only a very partial success. The fistula closed to about the size of the head of a pin, but there is still considerable leakage through this opening.

#### HYPERTROPHIC SPONDYLITIS.—By DR. PHIL.

HOFFMANN: I wish to present some cases of hypertrophic spondylitis from the orthopedic department of the Jewish Hospital, and have brought some radiographs, photographs and anatomic and pathologic specimens to help in illustration.

The subject of hypertrophic spondylitis has been of more than ordinary interest to me for some years and I think that I am beginning to understand some things that I did not understand before.

I believe there are two very distinct types of this trouble, types that are definite, separate clinical entities and separate pathologic entities. I believe also that they probably have two separate etiologies. They are different in their pathologic and clinical manifestations, perhaps not so much superficially but on close analysis different enough to make two entirely distinct types. There is a diffuse type, which tends to involve the whole spine, or a large portion of the spine, very rapidly, generally within a comparatively few months after you see a patient. I have rarely seen a case of this type where it was not well advanced at the time of first examination. There is another type, a localized type, in my experience a very common affection, which involves but a few vertebrae and does not tend to become diffuse. In the many patients that I have seen with this type and who have been under observation for years the lesion has remained localized, occasionally spreading somewhat, perhaps, but not to any great extent.

The diffuse type, as you see it in these several specimens, forms what look like ribbons of bone involving many vertebrae, frequently, as shown in two of the specimens, involving the whole spine from upper cervical to lower lumbar. The new bone involves not only the upper and lower margins, but also the whole longitudinal diameter of the walls of the affected vertebrae. At first glance these ribbons of bone suggest that the process began at some one point along the spine and, growing upward or downward, gradually involved the whole spine. Closer examination, however, will reveal that the growth of new bone began independently on the individual vertebrae, and, growing beyond the upper and lower margins of these vertebrae, coalesced at the intervertebral cartilages with similar growths from the vertebrae above and below. It will be observed that there are prominent

masses of bone at intervals along the ribbon-like formation, and that these masses are always at or very near the intervertebral cartilages. At these points the new growths from two vertebrae have come in contact and, each meeting the resistance of the other, have been diverted from their longitudinal growth and have overgrown outward, forming exostoses before coalescing. It will be observed that at some points they have not yet coalesced and at others only partially, while here and there small patches of new bone are seen on the individual vertebrae.

The localized type seems to be largely confined to the lumbar region and to the last two or three dorsal vertebrae. It is rare to find it high. Here we have a different character of new bone and it is differently distributed on the vertebrae. I have here many specimens in which you will observe that in some only one or two and in none more than four or five vertebrae are involved, and that the hypertrophic processes arise from the upper and lower margins of the bodies of the vertebrae and that they do not tend to form ribbons of bone or even encroach on the vertebral walls. The appearance is that of outgrowths from the margins of the vertebral bodies of which they are an intimate part, while in the diffuse type the appearance is that of deposits on the surface of the whole longitudinal diameter of the vertebral bodies, blending above and below in ribbon-like form with similar deposits on the contiguous vertebrae.

In the localized type coalescence between the hypertrophic processes on two vertebrae is rare, though it may occur. This is especially well shown in one of these specimens in which a very large process overlaps the contiguous vertebra but shows absolutely no tendency to become attached to it. In fact, not one of these specimens shows coalescence. In the diffuse type coalescence is the rule. You will also observe that the hypertrophic bone is much more dense in the specimens of the diffuse type than in those of the localized.

Clinically there is some difference in the two. In the diffuse type there is progressive and generally permanent stiffness of a large part and frequently of the whole of the spinal column. At first this stiffness is due to protective muscle spasm and later to bony ankylosis. In the localized type the stiffness is most marked in the lower part of the spine, and, being due entirely to muscle spasm, tends to subside after resting.

The patient's posture is of interest in differentiating between the two types. You will observe in these photographs of cases of the diffuse type that, while in some the anteroposterior spinal curves are greater than usual and in others they are less and still in others they are quite normal, there is no lateral curvature of the spine, but that the spine is centered laterally. This is also shown in these two large anatomical specimens of the diffuse type.

In these patients with the localized type that I present here tonight, as well as in these photographs of other cases of the localized type, you will observe a sharp lateral curvature of the lumbar spine that carries the trunk to one side and makes one ilium appear more prominent and higher than the other. Closer examination will show that the apparent pelvic asymmetry is not real. Of course, I do not mean to say that the diffuse type may not occasionally show a lateral spinal curvature or that the localized type may not present a straight spine laterally, but the opposite appears to be the rule.

The lateral curve of the localized type is due, probably, to the patient finding greater ease in this posture on account of the lesion being more on one side of the vertebral body, as is shown in many of these specimens. It is maintained by muscle spasm, and in most

cases, even after it has been present many months, it disappears when the spine is protected and put at rest.

Pain in the diffuse type may be widely distributed, while in the localized type it is usually restricted to the lumbar region, buttocks and lower limbs. Pain along the sciatic, even as far down as the foot, is an especially common symptom of the localized type. Frequently these cases with sciatica are diagnosed as sacro-iliac displacement or relaxation, because the apparent difference in the height of the two iliac crests and the greater prominence of one simulate displacement of the ilium. This appearance is, of course, due entirely to the lateral curvature of the lumbar spine. This patient, whose picture you see here, with the very marked prominence of the left ilium, and who had suffered severe sciatic pain for several years, was first referred by his physician to a prominent Chicago surgeon, who recommended a bone transplantation across the sacro-iliac joint to hold the ilium in place. I could not agree in the diagnosis and put the patient at rest to protect his spine with a plaster of Paris corset, making no attempt at the time to straighten the spine. The next picture shows him three months later, after the spinal irritation had subsided and the protective muscle spasm relaxed. You will observe that his spine is straight and that the prominence of the left ilium has disappeared. Here is another picture, a companion photograph of the first, which showed the apparent pelvic asymmetry, and was taken immediately thereafter with the patient in exactly the same posture. In this picture I have hidden the entire trunk above the iliac crests behind a screen of cardboard. You will observe that the two sides from the iliac crests downward are symmetrical. I made this photograph to convince the patient and his physician that his deformity was entirely above the iliac crests and that the left side of the pelvis was more prominent than the right on account of the lateral shifting of the trunk above.

The next picture is of another patient who had sciatica and had been treated for sacro-iliac subluxation for more than a year. You will observe the apparent pelvic asymmetry, which on closer examination proves to be a lateral curvature of the spine with shifting of the trunk above the pelvis and not a deformity of the pelvis at all. This patient, too, got well and has remained so several years.

It must be remembered that the bone hypertrophy is but an end result of an inflammatory process and that inflammation and symptoms may exist a long time before it appears, and that once present, it will persist permanently after inflammation and symptoms have subsided, and that it is not usually of itself a cause of distress.

The treatment in both types is rest and spinal protection. The diffuse type tends to progress despite treatment, though the patients can frequently be made much more comfortable by a well fitting spine support.

In the localized type the prognosis is good when the patient receives efficient treatment, though it tends to persist and grow worse, frequently in untreated cases making patients bedridden.

Years ago, when I did not differentiate between the two types, I used to dread to see these cases, and perhaps treated them in a half hearted way. In recent years, with a better understanding of the condition, I have considered the localized type of hypertrophic spondylitis as one of the most hopeful conditions that I have to treat. I know of many cases in which the symptoms that had been present for many months, disappeared during treatment and have not reappeared, though some of the patients have been without support eight or nine years.



The symptoms sometimes disappear within a few weeks and generally within two or three months after the spine had been placed at rest. I always advise my patients to continue wearing a spine support for a year or more after symptoms have disappeared.

I use the jacket as a spine support, at first a temporary one of plaster of Paris and later a permanent one of celluloid, cutting it at the sides into antero-posterior halves and making of it a bivalve removable brace, held together by straps and buckles, or bound to the trunk by bandages.

I prefer to keep the patient in bed a few days before applying the jacket. This makes its application more easy, especially in acute cases, as the rest in recumbency lessens the spinal irritation and the patient can assume a better posture and is in better condition to undergo the ordeal of having the jacket applied. I also employ a period of recumbency varying with the severity of the symptoms after the jacket is applied.

At first I do not leave the jacket on full time, especially not at night. I apply it loosely at first and take it off for a few hours when the patient complains of the restraint, and pad it wherever necessary. Gradually I apply it tighter and for longer intervals. Usually, within a few days the patient grows accustomed to it. Then, I have him wear it day and night until all symptoms have disappeared, after which he wears it only when upright and removes it during recumbency.

#### DISCUSSION

DR. REDER: I feel very grateful to Dr. Hoffmann for the light he has thrown on a case that is at present under my care, a case which was thought to be simply one of lumbago. There was no history of tuberculosis, no history of lues; Wassermann negative. The man was in apparently good health, except that he had continuous pain in the lumbar region. Roentgen-ray picture was taken of the spine and disclosed a picture similar to that which Dr. Hoffmann has shown us in one of the skiagraphs, when all the lumbar vertebrae looked as though they had coalesced. The feature of my case was that he had a lump pointing at the anterior superior spinous process of the ilium, which he said was a hernia. It felt like a hernia; you could press it back; it would immediately return when the pressure was released. We accepted the diagnosis of hernia and he was prepared for operation. The incision disclosed an enormous abscess. About two quarts of pus were evacuated. On the other side of the abdomen there was a hardened condition which aroused suspicion. Incision on that side disclosed another abscess cavity containing also about two quarts of pus. Do such cases as Dr. Hoffmann has cited terminate in pus formation?

DR. HOFFMANN: Never.

#### EXHIBITION OF PATIENTS.—By DR. MAJOR G. SEELIG.

Dr. Lister Tuholske has been called away and has asked me to present his cases.

We have here two typical cases of thrombo obliterative angiitis, so-called "presenile gangrene," the syndrome which is so common in Russian Jews. The cases came in complaining of almost intolerable pain. Physically, they seem negative. In this man, even the radiograph is negative; his arteries show little, but he has here a lesion which seems to be nothing more than an abrasion. He has had it for about a year. It refuses to yield, gives much pain, and responds to nothing. I have never tried the Japanese treatment of salt infusion injections, which has been recommended by McArthur and Meyer.

The other man is also a typical case. He has been

in bed, night after night, practically howling with pain. Here the Roentgen-rays show not only a thrombo obliterative angiitis but also a calcification. The lesion here was duplicated on the other foot and after temporizing a long time with him we were obliged to do an amputation at this site under local anesthesia. The man has been rather profoundly alcoholic, and he was in miserable shape as a result of pain over such a period. Dr. Lister Tuholske amputated this foot about a year ago—that is, in May of last year—and we expected then from the violaceous hue of the part that was dependent, although he was not complaining at the time, that we would have trouble with the remaining foot. The man smokes cigarettes in great number; that is about the only etiological factor which has ever been linked up with the syndrome, and, really, I do not think it has any definite relation. This trouble predominates very largely in Russian Jews.

I have always felt that this symptom complex was something more than a thrombo-angiitis. I have never been able to convince myself that it was not in part due to an angio-spasm.

Both these patients are almost certain to come to amputation, though the lesion appears to be insignificant. The way we treat them here is to bring them in the house and put the extremity under an enclosed frame. The enclosed space is heated by electric lights, and the foot is elevated. Both of these men have been fairly comfortable and free from pain, but just as soon as they go out they will have a recurrence.

I am showing this man because in the last five or six years, though seeing quite a number of these cases of tuberculous glands of the neck I have not done a single operation on them. Every one has gone on to spontaneous cure under tuberculin therapy. This was the most extensive case I have had, a mass running from the tip of the mastoid to the sternoclavicular joint. It was a solid mass; one could not map out any nodules. He has been here three or four weeks, has had two preliminary, diagnostic, tuberculin tests, and Roentgen-ray and tuberculin treatment since. Practically everything from here down is now discrete; you can feel a few small, shotty granules, and the mass is now quite movable. I am convinced, although this is the most extensive of our cases, that he is going to do as the others have done and clear up under the tuberculin and Roentgen-ray. He has been operated on at some previous time elsewhere. I have had cases where there were multiple fistulae, with calcareous degeneration, actual chunks of lime, the most hopeless looking lesion, but have not had a single case that has failed me under this treatment. I do not give the tuberculin myself in these cases. This man is getting an increase of a third of a milli gram every second day and every tenth day a Coolidge tube treatment.

DR. SMITH: Do you do that with softened glands?

DR. SEELIG: If the gland is broken down, is suppurating and pointing, a small cataract knife is put into it and the pus is evacuated. Then you have a fistula and under a very short course of tuberculin, long before the mass has disappeared, the fistula heals. We stick to the tuberculin treatment for six months. The patients may return a year later with another little gland somewhere, or a fistula open, but with a very few injections that disappears. I have been using this treatment for three or four years. The first case that I had was one of multiple fistulae with calcification, but under this treatment the condition disappeared. I have had mixed infections, too. I have not done adenectomies except at the City Hospital. I tried there to make arrangements to have the tuberculin treatment given, but it has been hard to control

it. In one case the operation was insisted on. The patient later developed the trouble on the other side, got tuberculin treatment in Chicago, and that side did much better than the one I operated on.

#### DISCUSSION

DR. M. B. CLOPTON: These cases of tuberculous glands of the neck are most interesting because every one seems to have changed his opinion in the last few years in regard to treatment, with the exception of one or two men in New York who make it a routine practice to operate. We rarely see tuberculous cases operated on here. The experience we have had has been that under hygienic care, without tuberculin, they have improved, with the exception of one child who has been in the hospital and at the end of a year's most careful treatment, hygienic surroundings, etc., still has a mass of tuberculous glands on both sides and will not get well. At the end of six months, the child was given tuberculin, without success, and we are going to resect one side of the neck to reestablish, if possible, a balance in favor of the annihilation of the infection.

The use of tuberculin, I think, is regarded very differently from what it was for a time. It is certainly, in many instances, very beneficial and some of us believe that the benefit comes largely from the fact that they are under very careful observation during the whole time they are given the tuberculin treatment, which they would not be if they were not taking it. The only thing that has appealed to me as definitely in favor of tuberculin treatment is that in those cases where there are corneal ulcers you can see them improve tremendously under the treatment. Certainly in this case of Dr. Seelig's the improvement has been enormous.

DR. PHIL. HOFFMANN: The first group of cases that Dr. Seelig showed should be of interest to the orthopedic surgeon, mainly because he must learn to let them alone, or at least not to resort to any treatment without some understanding of the serious vascular lesion. They come to the orthopedist complaining of pain in the foot or leg, or of difficulty in locomotion, and he is apt to get into trouble unless he learns to recognize them or the group to which they belong. Whenever I see them I turn them over to the general surgeon for treatment, but keep them under observation as a matter of interest and information. Dr. Seelig and I have had a number of these cases together.

The first case the doctor showed, the one in which amputation had been performed, was sent to the Jewish Hospital through the orthopedic department at the dispensary because the patient was complaining of pain under the heel. This was more than a year before there was any sign of gangrene. I did not see the patient at the dispensary, but at the hospital, on my first examination, I concluded that there was periostitis of the os calcis, the kind that precedes spur formation. This agreed with the dispensary diagnosis and was probably correct. For some years I have been much interested in so-called spurs on the os calcis, and especially so in the process that gives rise to their formation, that is, in the prespur stage. As I was eager to try a certain procedure for which this seemed to be a favorable case, I set a date for operation. The next morning I examined the patient, and this time I really examined the patient and not the heel alone. I noticed the appearance of his feet on weight-bearing and found difficulty in feeling the posterior tibial and dorsalis pedis pulse, and I concluded that, in addition to his os calcis trouble, he had serious vascular disturbance, such as is included

in the group described under such several names as intermittent claudication, angiosclerosis, endarteritis obliterans, and thrombo-angiitis obliterans. Of course, I concluded not to operate and had the patient transferred to the department of general surgery.

#### THE HAGNER BAG.—By DR. C. E. BURFORD.

I think most of you are familiar with the Hagner bag. I will demonstrate its use in two-stage prostatectomy. We know that in suprapubic prostatectomy we occasionally get something that theoretically we should not get. If we do not go outside the capsule we should not get any troublesome hemorrhage. Freyer, when he made his suprapubic tube, made it large, partly to get rid of clots and partly to pack through it if necessary. Hagner devised this bag, which is tied on to the Freyer tube for easy removal. It goes into the prostatic space and is ballooned up and you can make just as much pressure there as you wish. It staunches hemorrhage and tends to mould down the little pieces of mucous membrane that protrude into the bladder and holds them down in the prostatic cavity.

After the prostate is removed, this sound is introduced into the urethra and can be pushed up well into the prostatic wound, where the tube from the Hagner bag is pushed over it and the bag is drawn down into place. You can stick your finger down and feel that this is fairly in place. Then, with either a piston syringe or a Politzer bag on the other end, the assistant fills it with air until you feel it is tight enough and it is down tightly into the space. It is usually held down tightly for twenty-four hours and then taken out. I have had the experience before using this bag a few times, of taking out a prostate, having a fairly dry wound, no oozing, putting the patient to bed, then in a few hours a little blood would come, which grew worse, attributable perhaps to a little increased blood pressure after taking the anesthetic. Hagner, of Washington, devised this bag just to enable the surgeon to go home and get a good night's rest. I have never seen a troublesome hemorrhage when this bag has been put in place. Perhaps three times out of four it is unnecessary, but I have come to use it as a routine and I think if it were used as a routine an occasional bad hemorrhage would be avoided.

I think Dr. Robertson does not use any drain at all. To keep the patient dry for a few days, it is my custom to use this little right-angled suprapubic tube, insert it in the suprapubic wound when I take this large Freyer tube out and look after the drainage in that way. Naturally the wound is larger than the small tube, so in order to keep the wound dry I take one extra stitch in my wound, which I do not attempt to tie until the large tube is removed and the smaller one is inserted.

DR. FRANCIS REDER: It may sometimes happen that when you wish to use the Hagner bag there is none at hand. For such occasions I have made use of a small toy balloon, tying it to the open end of a rubber catheter. It is introduced like the Hagner bag and has made a very efficient substitute.

#### EXHIBITION OF PATIENT.—By DR. H. J. SCHIERCK:

This is to me a very interesting case, from two standpoints; first, the benefit of confirming the Roentgen ray by the injection of the kidney pelvis; and second, the possibility of the trouble having been caused by something that is also demonstrated in the objective specimen. The patient is a woman about 38 years of



age, operated on before I saw her and two stones removed from the kidney. Hematuria persisted. When she came to me there was considerable hematuria and pus in the urine. Roentgen ray showed this condition: Roentgen-ray catheter going away up, then curving around in this direction, and here is the stone.

In trying to interpret the Roentgen ray, I was not sure as to the exact condition of the tumor; whether on account of the pus mixed with the blood it was a pus kidney with a good deal of obstruction, or whether the ureteral opening had been misplaced and the catheter twisted around. So I injected the kidney with thorium solution and got this. You notice the kidney is dilated, then there is a point of tight constriction and a very much dilated pelvis. The method was to keep the catheter in the ureter, taking the picture, making gradual pressure so as to distend the ureter if possible.

There was history of trouble for many years, since childhood in fact. The question in my mind was whether or not the formation of the stone had been brought about by the fact that for many years she had had a stricture of the ureter, perhaps from some infection. This shows exactly the condition of the pelvis, that Roentgen-ray catheter was not out of the pelvis of the kidney, that the opening of the ureter was not out of place. I think it is interesting from the fact that the two pictures made the story rather complete and cleared up any question of interpretation of the first Roentgen-ray picture and possibly explained the kidney trouble by this old stricture of the ureter which is so nicely shown.

#### BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society met in regular session Thursday afternoon, Aug. 30, 1917, in the office of Dr. T. C. Boulware, Butler, Mo. The meeting was called to order at 2:30 p. m. by Dr. Boulware, the vice president. The minutes of the previous meeting were read and approved. Those present were Dr. H. A. Rhoades of Foster, Dr. S. L. Bates of Adrian, Drs. T. F. Lookwood, E. N. Chastain, T. C. Boulware and J. S. Newlon of Butler.

The meeting was wholly consumed with the reporting of cases. Dr. E. N. Chastain opened the program and reported several very interesting cases that were well discussed by everyone present. Then each in turn reported cases of equal interest, followed by a liberal discussion.

The Bates County Medical Society adopted a plan this year of reporting cases when having no outside talent with us and when our members are too busy to write papers. This has proved to be a very interesting and satisfactory procedure to the society as a whole.

This being the first meeting since the death of our devoted and honored member, Dr. Floyd S. Bates of Adrian, the society was unable to take action sooner and discharge its full duty in that respect. The chair appointed Drs. E. N. Chastain, T. F. Lockwood and T. W. Foster a committee on resolutions with instruction to act immediately, drawing up suitable resolutions on the sad and untimely death of Dr. Bates.

The committee reported as follows:

WHEREAS, Dr. Floyd S. Bates, born Aug. 18, 1887, at Adrian, Mo., the son of Dr. and Mrs. Smith L. Bates, a graduate in medicine from the University Medical College, Kansas City, class of 1910, and having practiced his profession in Adrian with his father since his graduation, and

WHEREAS, Dr. Bates offered his services to his country when war was declared, having been com-

missioned a first lieutenant in the Medical Reserve Corps stationed at Fort Riley, Kansas, and being instantly killed by lightning while sleeping in his tent, be it

*Resolved*, That the Bates County Medical Society deplores the sad and untimely death of its honored member and fellow practitioner, and that a copy of these resolutions be spread on the minutes of our society, one copy sent to the bereaved wife and family and one copy sent to the State Medical Journal.

There being no other business, the society adjourned until next convened by order of the president, Dr. J. H. Fletcher. J. S. NEWLON, M.D., Secretary.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society, Wednesday evening, Sept. 5, 1917, consisted of a social session held at the Woodson Sanitarium by invitation of Dr. C. R. Woodson. About seventy-seven members were present. Talks were made by the following doctors: C. H. Wallace, A. L. Gray, F. G. Thompson, J. M. Bell and C. R. Woodson.

By unanimous consent it was voted that the thanks of the Society be extended to Dr. Woodson for the splendid dinner served.

The following resolution by Dr. C. R. Woodson was unanimously adopted:

*Resolved*, That the doctors of this Society vigorously protest to the following railroads, C., B. & Q., Santa Fe, and Rock Island, at the dangerous and deplorable condition of the railway crossing at the intersection of Twenty-Second Street and Garfield Avenue, also to the Great Western on the same condition of their Fourth Street crossing, and the Secretary was instructed to send each of the above railroads a copy of the above resolution.

#### Meeting of September, 19

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, Sept. 19, 1917, the president, Dr. Floyd Spencer, in the chair. Twenty-one members were present. The minutes of the previous meeting were read and approved.

On motion of Dr. Potter, seconded by Dr. Willman, the following committee of three was appointed by the chair for the purpose of conferring with the board of directors of the Y. M. C. A. with a view of obtaining the terms of their proposition inviting the society to hold their meetings at the above-mentioned place. The committee was instructed to report at the next regular meeting.

The paper of the evening, subject, "Abortive Treatment of Syphilis," by Dr. G. A. Lau, was very instructive, and was discussed by Drs. Paul and Potter; discussion closed by Dr. Lau.

Dr. Delameter addressed the society with a view of impressing on the members the necessity of registering all births and deaths personally, and stated that the practice of telephoning these notes to the undertaker and permitting him to sign their name to the certificate would not be tolerated in the future.

W. F. GOETZE, M.D., Secretary.

#### CLAY COUNTY MEDICAL SOCIETY

The August meeting was held in the Major Hotel in Liberty, Monday evening, August 27. This meeting was arranged as a small social affair and members were invited to bring their wives to share in a dainty treat of ice cream and cake. Everything was auspicious but the weather. One of those regular gully-

soakers came up in time, and stayed long enough to create a very damp impression of a very dry town. In spite of the inclemency, however, a few of the faithful were at their posts of duty. Dr. E. E. Parrish, Secretary of the Scotland County Medical Society, was a welcome visitor.

Dr. George Dagg, of North Kansas City, being now in the army in France, it was unanimously voted that the Society keep Dr. Dagg's dues paid during his service in the war.

Dr. W. F. Kuhn, of Kansas City, delivered an address on "The Mental and Moral Delinquent." He classified the types of insanity, and said that the mental degenerate did not belong to either class. These unfortunate beings are not insane, neither are they subjects for the prisons or reform schools. They are incurable. They "break" sooner or later, and die or suicide. They will not stop at anything, from petty thievery to murder; 40 per cent. of them are Wassermann-positive. The luetic are usually hereditary types. They are on the increase, and when discharged from institutions, propagate their kind—a thing to be deplored. They are nonreformable. Dr. Kuhn thought the only treatment is detention in an institution for life. We have no such institutions, and usually take the miserable makeshift and mistake of placing them in penitentiaries and asylums. The doctor gave an interesting history of the Thaw-Gump affair, which is yet fresh in the minds of many, as an example of moral perversion and Saadism.

The subject was discussed by Drs. Rothwell, Matthews and Parrish. Dr. Matthews spoke, strongly condemning the political management of state institutions. In this all concurred.

A rising vote of thanks was tendered Dr. Kuhn, after which the Society adjourned and the floods abated not.

J. J. GAINES, M.D., Secretary.

#### GREENE COUNTY MEDICAL SOCIETY

Vacation days are over and the Greene County Medical Society has again settled down to active business.

During our vacation period seven of our members were called to the colors, having received commissions as first lieutenants in the Medical Reserve Corps: Drs. M. C. Stone, J. E. Dewey and H. A. Lowe were ordered to Ft. Logan H. Roots, Ark.; Drs. Robert Glynn, W. J. Wills and E. M. Box to Ft. Riley, Kan.; Dr. W. A. Delzell to Leon Springs, Tex. Drs. J. M. Potts and George D. Wells have received commissions and are awaiting orders.

The following resolution was adopted by the Greene County Medical Society:

WHEREAS, The Greene County Medical Society has the distinctive honor of contributing several of its members to the Medical Reserve Corps of the U. S. Army, in behalf of these doctors and all other members of the society that may hereafter be called, be it

*Resolved*, That the Greene County Medical Society extend to them its fraternal, patriotic and loyal support in responding to a national call. Further, we assure them of our sincere sympathy and best wishes for a successful service and an early and happy return home to their families and associates.

At this meeting of the society, Friday, September 14, twenty-four members were present to listen to an excellent paper by Dr. J. D. James on "Toxemias of Pregnancy." The presentation of this paper brought forth a hearty discussion.

On motion duly seconded it was voted to send this paper to Dr. E. J. Goodwin for publication in the Missouri State Medical Journal.

THOMAS O. KLINGNER, M.D., Secretary.

#### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in regular session in the County Court Room, Clinton, on Wednesday, Sept. 12, 1917. The meeting was called to order by the president, Dr. A. J. McNees, at 2 p. m. Present were Drs. R. J. Jennings, H. M. Wall, J. H. Walton, T. A. Blackmore, R. L. Shadburn, F. P. Miller, J. W. Galbreath, J. J. Russell, C. F. Howard, J. G. Beaty, J. B. Rogers, A. J. McNees, W. R. Campbell, S. W. Woltzen, E. C. Peelor and F. M. Douglass.

The minutes of the previous meeting were read and approved.

Dr. McNees reported a case. Man over 70. Diabetic. Albumin and blood in urine; could pass catheter; clots obstructed flow of urine; made a suprapubic opening and stitched a colon tube into it to draw urine and lavage the bladder. Dr. Walton believed that essence of pepsin would dissolve the clots.

Dr. F. P. Miller read a paper on pyelitis that was very interesting and instructive, showing a splendid knowledge of the subject by experience and research, giving the latest thought and investigations of the trouble. Discussion by Drs. T. A. Blackmore, J. H. Walton and A. J. McNees, all agreeing that Dr. Miller had told in a short, concise way how to diagnose and treat such cases, and that it was very important to examine and analyze all the excreta. Dr. Miller, in closing, emphasized a few points brought out.

Dr. J. H. Walton reported his having the Gooch case, shown at the Windsor meeting, at St. Louis for having radiographs made of the enlarged aorta and the kidney, the result of which proved his contention that the trouble was a dynamic aorta.

The Secretary read several communications from the Council of National Defense and pertaining to Senator Owen's amendment raising the rank of medical officers in the Army, all of which were approved and by vote of the Society the Secretary was instructed to write our Senators and Congressman requesting them to vote for the amendment.

F. M. DOUGLASS, M.D., Secretary.

#### LACLEDE COUNTY MEDICAL SOCIETY

The Laclede County Medical Society met in special session Tuesday, July 31, 1917, and enjoyed a picnic at Hahatonka, Mo. The members of Camden County Medical Society were invited as guests. Present were Drs. S. Mills and G. T. Myers, of Mack's Creek; J. D. Moulder, of Linn Creek; Drs. Robert Richey and B. W. Vaughan, of Urbana; Drs. E. A. Oliver and H. S. Rowlett, of Richland; Dr. C. E. Carlton, of Stoutland; Dr. T. U. Gourley, of Phillipsburg; Dr. J. C. Scott, of Fate, and Drs. J. M. Billings, T. B. Herbert, S. A. Casey and J. A. McComb, of Lebanon.

After the morning spent in seeing some of the natural wonders of Hahatonka, we ate our lunch near the old mill and spring. The lunch was served by our wives and daughters, who by their presence added much to the pleasures of the day.

At 2 o'clock, in the absence of Dr. C. H. Neilson of St. Louis, who was to have addressed us but who was unavoidably detained, one of our number read for us a ten-year-old paper on "Puerperal Eclampsia." The discussion developed the fact that we were not seeing nearly so many cases of eclampsia as we did ten or more years ago, due, we think, to the better care being given pregnant women.

After a general discussion of the war, with special reference to the doctors' obligation thereto, we repaired to the dining hall of J. L. McWilliams, where we devoured Missouri fried chicken and trimmings as only hungry doctors and their families have a right to do in this time of scarcity (?).

Through the courtesy of Superintendent Dawson, we visited the beautiful unfinished mansion of Mr.



R. M. Snyder which, by the untimely death of Mr. Snyder, seems never will be completed. Some, not yet satisfied with seeing things, started to explore the beautiful River Cave—others for home. So far as is known, the day was a perfect one, without incident or accident to mar the pleasure of any; not even a flat tire. It is the understanding, however, that the ladies had some little argument as to who was the best physician at the picnic.

J. A. McComb, M.D., Secretary.

### LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The Lawrence-Stone County Medical Society met at the State Sanatorium, Mt. Vernon, Tuesday, Sept. 4, 1917, with the following physicians present: Drs. C. A. Moore, T. D. Miller, R. C. Robertson, D. C. Adams, J. A. Melton, S. A. Newman, W. I. Fulton, J. A. Harris, Harry Evans, W. S. Loveland, J. W. Smith, J. P. Andrews, T. T. O'Dell, Fred Brown, E. E. Wade, L. Henson, St. Clair Shumate, H. L. Kerr, W. U. Deatherage, F. R. Spell, Sam Clark and P. A. Holmes.

The applications for membership of Dr. W. U. Deatherage of Hobcrg, Dr. F. R. Spell of Freistatt, Dr. Edw. L. Mize of Stotts City and Dr. P. A. Holmes of Chesapeake were read and all were elected to membership.

The Society adjourned to the dining room of the Sanatorium where a splendid dinner was served.

The Society reconvened at 1 o'clock and the following program was rendered:

"The Physician's Duty," by Dr. T. T. O'Dell, Marionville.

"The Sanatorium Treatment of Tuberculosis," by Dr. J. A. Harris of Mt. Vernon.

The Society, after extending a vote of thanks to Dr. S. A. Newman, Superintendent of the Sanatorium, adjourned to meet in Aurora, December, 1917.

R. C. ROBERTSON, M.D., Secretary.

### RALLS COUNTY MEDICAL SOCIETY

The Ralls County Medical Society met in regular session at Spalding Springs, Aug. 16, 1917. This was an open meeting, and about 300 of Ralls County's good people were out with us. The Hannibal doctors were in evidence and altogether we had a good time. I am sorry you could not be with us.

The program was as follows:

Dinner at 11:30 a. m.

Patriotic address by Dr. J. W. Boulton of New London.

Red Cross address by Dr. W. T. Waters of New London.

Ralls County National Defense address by Sidney J. Roy of Hannibal.

The Ralls County Medical Reserve address, by Dr. H. B. Norton of Center.

"The Surgeon's Care of the Injured Soldier That Puts Him in Shape to Return to the Firing Line," by Dr. Thomas Chowning of Hannibal.

"Injuries Peculiar to Modern Warfare," by Dr. Richard Schmidt of Hannibal.

"Sanitation and Prevention of Disease Among the Soldiers," by Dr. J. J. Bourn of Hannibal.

"Vaccination and Immunity; Their Necessity and Their Protection," by Drs. W. P. Birney and J. E. Brown.

"The Privileges and Duties of the Doctor Who Remains at Home, Particularly as to His Brother Who Is on the Fighting Line," by Dr. J. N. Baskett, Hannibal.

Organization of the Ralls County Reserve Doctors, all those who are 22-55 inclusive.

T. J. DOWNING, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**NEODIARSENOL.**—Neodiarsenol has the composition, physical and chemical properties and action, uses and dosage as given for neosalvarsan in New and Nonofficial Remedies, 1917. Neodiarsenol is supplied in ampules containing, respectively, 0.15, 0.3, 0.45, 0.6, 0.75 and 0.9 Gm. neodiarsenol. Neodiarsenol is accepted for New and Nonofficial Remedies, as the available supply of neosalvarsan seems to be insufficient to meet the demand, and this preparation conforms to the rules of the Council. Neodiarsenol is made in Canada under a license issued by the Commissioner of Patents of Canada. The Farbwerke-Hoechst Company holds the sale of neodiarsenol in the United States an infringement of its rights, and has stated that all violations of its rights will be prosecuted. The Diarsenol Company, Limited, Toronto, Canada (*Jour. A. M. A.*, Aug. 4, 1917, p. 383).

**GASTRON.**—A solution of the gastric tissue juice obtained by direct extraction from the mucosa of the fresh stomach of the pig. It contains 25 per cent. by weight of glycerin, 0.25 per cent. absolute hydrochloric acid, and 1 Cc. is capable of dissolving 200 Gm. of coagulated egg albumin. Gastron is designed for use in disorders of gastric function. Fairchild Bros. and Foster, New York (*Jour. A. M. A.*, Aug. 25, 1917, p. 645).

### PROPAGANDA FOR REFORM

**STANDARDIZATION OF SERUMS AND VACCINES.**—The misunderstandings and difficulties as regards the standardization of serums and vaccines are pointed out by G. W. McCoy, Director of the U. S. Hygienic Laboratory. So far legal standards have been formulated only for diphtheria and tetanus antitoxin. A tentative standard for antityphoid vaccine has been devised. This completes the list of standardized biologic products. Though not standardizable, vaccine virus and anti-rabic virus are tested for potency in the process of manufacture. McCoy reviews the work which has been done in the attempt to work out and standardize other biologic products, and brings out the many difficulties which are in the way (*Jour. A. M. A.*, Aug. 4, 1917, p. 378).

**BILE, A CHOLAGOGUE.**—The view that bile absorbed from the alimentary tract increases the secretion of bile, and thus acts as a true cholagogue, seems to be established. The feeding of fresh bile to bile fistula dogs causes an almost constant cholagogue action. The bile of the dog, sheep and pig all have this effect, and ox bile seems to be the most active cholagogue. Of the bile constituents, glycocholic acid has a moderate cholagogue effect, but usually causes a great drop in bile pigment output in a bile fistula dog; taurocholic acid has a strong cholagogue action, but little inhibiting effect on bile pigment secretion; the bile fat has no influence on bile flow, but causes inhibition of bile pigment secretion; cholic acid has little effect on bile flow but may decrease the bile pigment output (*Jour. A. M. A.*, Aug. 4, 1917, p. 386).

**ADMINISTRATION OF AGAR.**—O. H. Brown and W. O. Sweek favor the administration of agar in the form of a hot lemonade, chocolate or bouillon. For the preparation of a lemonade they direct to take 2 heaping tablespoonfuls of the agar powder, flakes or shreds; add to 1 quart of water, and boil till the agar is thoroughly liquified; sweeten and add juice of one lemon; then drink the entire quart while hot. They suggest that the quart of hot agar lemonade may be prepared in the morning, poured into a vacuum bottle, and taken leisurely during the day. They find that patients prefer to make use of orange, grapefruit, vanilla, maple or other flavoring in place of the lemon (*Jour. A. M. A.*, Aug. 11, 1917, p. 467).

**TRIMETHOL.**—The Council on Pharmacy and Chemistry concludes that the claims for Trimethol are unsupported by acceptable evidence, and has declared Trimethol and the pharmaceutical preparations said to contain it—Trimethol Syrup, Trimethol Capsules and Trimethol Tablets—sold by Thos. Leeming and Co., New York, ineligible for New and Nonofficial Remedies. The Trimethol preparations are advertised for use in all conditions dependent on intestinal putrefaction, and some of the advertising claims give to "Trimethol" the scope of a panacea. A request for Trimethol having been refused by the manufacturers, the Council's bacteriologist examined one of the pharmaceutical preparations said to contain it. Although the preparation was found to be a germicide, the examination did not indicate that Trimethol had any remarkable potency or other properties suggesting that it possessed special therapeutic value (*Jour. A. M. A.*, Aug. 11, 1917, p. 485).

**IODINE OINTMENTS.**—An examination of iodine ointments made in the A. M. A. Chemical Laboratory by L. E. Warren demonstrated that when made according to the method of the U. S. Pharmacopoeia (dissolving iodine in potassium iodide and glycerine and then incorporating with benzoated lard), about 20 per cent. of the free iodine used combines with the ointment base. On standing for a month a further quantity of 5 per cent. goes into combination, and after this no further loss of iodine occurs. The composition of iodine ointment, U. S. P., after a month or more is approximately: free iodine, 3 per cent.; iodine combined with fat, 1 per cent.; potassium iodide, 4 per cent.; benzoated lard (containing combined iodine) 80 per cent. The U. S. Pharmacopoeia requirement that iodine ointment shall be freshly prepared appears to be unnecessary. It was also found that if iodine ointment is made without the addition of potassium iodide, practically all of the free iodine enters into combination with the fat (*Am. Jour. Phar.*, Aug., 1917, p. 339).

**SOME MISCELLANEOUS NOSTRUMS.**—Limestone Phosphate is devoid of limestone. It is a mixture of sodium bicarbonate and sodium acid phosphate, which when dissolved in water yields the ordinary sodium phosphate.—Parmint, according to the advertising, should be used for the treatment of catarrhal deafness, head noises, catarrh of the stomach, catarrh of the bowels, loss of smell, lung trouble, asthma, bronchitis, etc. Parmint appears to be an alcoholic solution containing sugar, glycerin, a small amount of chloroform and a mixture of volatile oils with oil of anise predominating.—Varnesis is a "rheumatism cure" which, when analyzed some time ago, was found to contain less than 1 per cent. vegetable extractives chiefly derived from emodin-yielding drugs and capsicum. Taken according to directions, its use consumes as much alcohol as he would obtain from the consump-

tion of a half pint of raw whisky every four and one half days.—Fruitatives is sold under a meaningless statement of composition and with claims that suggest it to be a cure for paralysis, consumption, rheumatism, etc. It is probable that Fruitatives possesses no virtues not found in aloin, belladonna and strychnine pills. (*Jour. A. M. A.*, Aug. 18, 1917, p. 582).

**SERUM TREATMENT OF PNEUMONIA.**—Rufus Cole reports that one third of the cases of pneumonia are due to Type I pneumococci, one third to Type II pneumococci, from 10 to 15 per cent. to Type III, and the remainder to pneumococci belonging to the fourth group. The mortality from infection with Type I and Type II is of average severity with a mortality of from 25 to 30 per cent.; that from Type III is severe and more than one half of the patients die from this infection, while the mortality from Group IV is only about 10 to 15 per cent. Antipneumococcic serum is efficient only in infection from Type I, and Cole has come to the conclusion that the serum should be administered only after it has been determined that the infection is due to this type. He reports that certain commercial serums have been found inefficient or without effect against Type I infection. He also reports his experience with commercial serums which are inefficient or inert. It is expected that the U. S. Public Health Service will soon establish a method for the standardization of antipneumococcic serum (*Jour. A. M. A.*, Aug. 18, 1917 p. 505).

**SOME MISCELLANEOUS NOSTRUMS.**—Newspapers advertise Swift's Sure Specific for the treatment of "rheumatism" and "impure blood." The advertising matter sent out by its promoters recommends "S. S. S." for the self-treatment of syphilis. No information is offered in regard to the composition of "S. S. S." except that it contains 15 per cent. alcohol and the claim that it is "made from purely vegetable ingredients."—Kaufmann's Sulphur Bitters are claimed to contain sulphur, gentian, wild cherry, aloes, eupatorium, "Tanacetum," balmoney, podophyllum, "Senna Indica," calamus. It was sold as a remedy for scrofula, catarrh, salt rheum, rheumatism, etc., but the government declared these curative claims false and fraudulent (*Jour. A. M. A.*, Aug. 25, 1917, p. 663).

**TREATMENT WITH VACCINES.**—The conditions—self-limited infections and chronic infectious processes—in which vaccine treatment has been employed make it exceedingly difficult to determine if vaccines are of value. As pointed out by J. P. Leake of the U. S. Public Health Service, whenever the use of vaccines in a certain disease has been carefully controlled, its use has been found of little value. This is true of whooping cough, typhoid fever and gonorrheal vulvovaginitis and probably in pyorrhea alveolaris. As for the strikingly favorable results in individual instances which are reported by vaccine enthusiasts and repeated in advertisements, these may all be matched by equally brilliant results in cases not treated with vaccines (*Jour. A. M. A.*, Aug. 25, 1917, p. 648).

**NASOPHARYNGEAL DISINFECTION BY HYPOCHLORITES.**—While the practical sterilization of infected wounds by means of hypochlorites has been effected, the sterilization of the nose and throat is far more difficult, especially in the case of diphtheria and meningococcus carriers. Encouraging results from the use of a hypochlorite substitute, dichloramine-T, have been reported, but these require confirmation (*Jour. A. M. A.*, Aug. 25, 1917, p. 651).



## BOOK REVIEWS

**HANDBOOK OF GYNECOLOGY FOR STUDENTS AND PRACTITIONERS** By Henry Foster Lewis and Alfred De Roulet. St. Louis: C. V. Mosby Company, 1917.

One of the very many books recently published on the subject. It does not pretend to contain anything new, but it is compact, well arranged, and a good book for the third and fourth year student. W. C. G.

**PHYSICAL EXERCISES FOR INVALIDS AND CONVALESCENTS.** By Edward H. Ochsner. St. Louis: C. V. Mosby Company, 1917.

A very comprehensive handbook so explicit in treatment as to be of great value to those for whom it is intended—invalids and convalescents. It is well illustrated. W. C. G.

**MISCELLANEOUS NOSTRUMS. — MEDICAL INSTITUTES.** Prepared and issued by the Propaganda Department, American Medical Association, 535 N. Dearborn St., Chicago.

These two pamphlets contain data not available elsewhere that will give physicians and laymen accurate information concerning many nostrums and quack institutes that are widely advertised in the lay press—and unfortunately a few of them in some so-called medical journals. Physicians ought to have these books on their desks at all times so that they may learn the truth about such humbugs and expose them whenever inquiry is made concerning them. The formulas of nostrums are given and the methods of the institutes quite extensively portrayed.

**A HANDBOOK OF PRACTICAL TREATMENT**, by many writers; edited by John H. Musser, Jr., and Thomas C. Kelly, of Philadelphia. Volume IV. Cloth, 8 mo. Pp. 1,000. Philadelphia: Saunders, 1917.

As is inevitable in such a compilation, the individual articles vary greatly in merit. Some are so good that your reviewer will keep them for reference; others so poor that he feels sorry for their authors. Most of the writers have been wise enough to write in such a way that constant reference to the preceding volumes is not necessary. This is of great help. Many have written enough on diagnosis and pathology to make their articles short and readable monographs on the disease treated.

Janeway's article on diabetes is excellent. Rowland has a good discussion of acidosis in children. Fitcher has an article on arthritis deformans, but there is none on arthritis in general, and consequently no mention of the use of nonspecific vaccines in this disease. In the article on syphilis no mention is made of the intravenous and intraspinal use of mercury.

In general, we have here a book that will be of help to a discriminating reader who has plenty of other literature to check it by. G. H. H.

**A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS.** By Lewis A. Stimson, B.A., M.D., LL.D. (Yale), Professor of Surgery in Cornell University Medical College, New York; Consulting Surgeon to New York and Bellevue Hospitals; Corresponding Member of the Société de Chirurgie of Paris. Eighth Edition, Revised and Enlarged. With 475 Illustrations and 39 Plates in Monotint. Price \$6.00. Lea & Febiger, New York and Philadelphia, 1917.

This latest edition of Stimson's *Fractures and Dislocations* is revised and very much enlarged, particularly on the subject of treatment. After a careful

study of the various new features introduced in the treatment of fractures, brought about in the present war, Stimson has introduced much that is new and valuable. A man of Stimson's critical ability in fractures would only include those things which would be of value to the student and practitioner.

We are glad to note that the subject of dislocations receives added attention. It has seemed to us that the majority of textbooks give only sufficient discussion of dislocations to confuse the average student. This edition is a most valuable addition to the library of any medical student or doctor. H. S. M.

**SURGICAL OPERATIONS.** By Prof. Fedor Krause, Privy Medical Councilor, Directing Physician Augusta Hospital, Berlin, in association with Emil Heymann, M.D., Chief Physician, Augusta Hospital. Translated into English and edited for American readers by Albert Ehrenfried, A.B., M.D., F.A.C.S., First Assistant Visiting Surgeon, Boston City Hospital, etc. In six volumes. Volume II, with 373 illustrations in two or more colors. Rebman Company, 141, 143 and 145 West Thirty-Sixth Street, New York. Price, \$7.

This second volume followed about two years after the first, and the translator has succeeded in giving us an English version, which is at least as good if not better than the other volume. The opening chapters treat of the operations on the upper jaw. Then follow numerous chapters on certain procedures on the lower jaw, mouth, face, throat and neck. Chapters 18 to 21 treat of the surgery of the brain, the surgical treatment of epilepsy, surgery of brain tumors, operative treatment of brain abscess. Here the masterly work of Krause is again evident. The material is too abundant for detailed description. The many illustrations and plates are good. Those which were added by the American editor are well selected. The text abounds with case histories. R. E. S.

**ROENTGEN TECHNIC (DIAGNOSTIC).** By Norman C. Prince, M.D. St. Louis: C. V. Mosby Company, 1917.

The author in his preface says the book is written for the general practitioner who has bought a transformer but does not know how to use it, or, for the doctor who gained his knowledge from the x-ray salesman. Interpretation is passed over entirely the introduction says, but the author does in a few instances explain what is seen on the fluoroscope or in the roentgenogram.

Chapter I gives a description of the fluorescent screen and the photographic plate.

Chapter II describes x-ray tubes.

Chapter III deals with the operation of the transformer. The directions given apply to one make of transformer only and could not be followed with other transformers.

Chapter IV deals with the general examination of the patient.

Chapter V is the main chapter of the book. Here are given the positions and exposures of various parts of the body, with illustrations of the positions used. In this chapter the author has seen fit to digress from his preface in that he gives some explanation of the things seen in the chest, kidneys, ureters, esophagus and stomach.

Chapter VI gives a few hints to be used in sinus injections.

Chapter VII explains the methods of locating foreign bodies.

Chapter VIII deals with dark room technic.

The book is written for the beginner in x-ray work who has had no laboratory experience. E. H. K.

**EXPERIMENTAL PHARMACOLOGY.** By Dennis E. Jackson, Ph.D., M.D., Associate Professor of Pharmacology, Washington University Medical School, St. Louis. C. V. Mosby Company, St. Louis, 1917. 536 pages. Price \$4.00.

The book in principle is a laboratory guide to experimental work in elementary pharmacology. The text is divided into two parts: Part I gives detailed directions for performing 166 selected experiments; Part II contains interesting chapters on shop work and practical photography. A list of dealers in pharmacological apparatus, tools, supplies, equipment, etc., appears at the end of the text.

The experiments are not planned to cover a great number of drugs, but rather to acquaint the student with pharmacological methods and the therapeutical values of the more important ones. General anesthetics are first considered. Following these are experiments on groups of drugs which are chiefly characterized by their action upon the central nervous system, involuntary system, heart and circulatory apparatus. Experiments are also described to show the action of antipyretics, miscellaneous drugs, the acids and alkalis, and lastly, the heavy metals.

It is a relief to find the book illustrated with new and original drawings. The free use of graphs, diagrams and drawings of dissections throughout the text is commendable. Some of the illustrations might have been spared as second year medical students are necessarily familiar with certain elementary pieces of apparatus.

The author has shown ingenuity and practicality in his use of simple methods and his ability to make workable apparatus from common and handy materials. The suggestions upon dosage are the result of the author's own experiments upon laboratory animals.

The work is well handled and is presented in a methodical manner. The book should prove a practical manual for courses in laboratory pharmacology.

H. W.

**THE NEWER METHODS OF BLOOD AND URINE CHEMISTRY.** By R. B. H. Gradwohl, M.D., Director of the Pasteur Institute of St. Louis and the Gradwohl Biological Laboratories, St. Louis, and A. J. Blaivas, Assistant in the same. Cloth. Price, \$2.50. Pp. 240, with sixty-five illustrations and four color plates. St. Louis: C. V. Mosby Company, 1917.

There is a great deal of work being done along the line of the chemistry of the blood and urine as a means of making an early and correct diagnosis. It is comparatively a new field of medical research. The exact pathological changes that take place in the human body in disease has been little understood heretofore. Rapid advances are being made all the time. These new laboratory methods make possible an early and correct diagnosis, an index as to the proper therapeutic agents and a means to check up and control the treatment.

Dr. Gradwohl in his book "Blood and Urine Chemistry," has made a very valuable and useful contribution to medical literature. He evidently has made a careful review of the literature of the subject up to the date of the issue of his book. The numerous methods that have been brought out for performing the various chemical analyses of the blood and urine have been carefully tried out by him in his laboratory and his book gives us the methods and technique that he has found the least complex and yet exact

enough for all practical purposes. He does not waste time and space and confuse his readers by giving several methods for making the same test. He gives one method for each test, then goes carefully into the details of the technique so that any one with laboratory experience should be able to perform the test. He also gives very careful directions as to the interpretation of the results, the sources of error to be guarded against and the conclusion to be drawn from given findings.

Tables are given of the normal findings and of the results in the abnormal conditions. The tables are very carefully tabulated and complete so that it is very easy to check up results. The chapters devoted to the discussion of the chemical findings of the blood and urine, diabetes, acidosis, gout, etc., are very instructive. It is pointed out how a more accurate knowledge of the condition can be obtained, therefore a rational treatment instituted.

The book may be recommended as almost indispensable to any one attempting to do up-to-date laboratory work, as a convenient, concise and accurate laboratory guide.

W. C.

**NUTRITION AND CLINICAL DIETETICS.** By Herbert S. Carter, M.A., M.D., Associate in Clinical Medicine, Columbia University, etc.; Paul E. Howe, M.A., Ph.D., Assistant Professor of Biological Chemistry, Columbia University, and Howard H. Mason, A.B., M.D., Instructor in Diseases of Children, Columbia University. Lea & Febiger, Philadelphia, 1917. Cloth, 8 vo, pp. 646. Price \$5.50.

The authors are members of the faculty of Columbia University of New York City. They have attacked the problem of foods in an academic way quite worthy of their institution.

The book is divided into four parts, viz., Foods and normal nutrition, pp. 23 to 119; foods, pp. 122 to 228; feeding in infancy and childhood, pp. 229 to 267; feeding in disease, pp. 269 to 600.

Parts 1 and 2 are very valuable because they contain summaries of the reports of the important researches on the subject up to the time the manuscript was prepared. Parts 3 and 4 are not so successful because these parts are clinical and require personal clinical experience on the part of the authors to bridge the gap between the laboratory and the sickroom, or between theory and practice. Thus one feels that the authors have not personally used extensively Cohnheim's Diet in the form given on page 353. Nevertheless, it is interesting to have at hand the collection of data thus brought together.

It is interesting to see, as on page 440 *et seq.*, the proneness of the authors to mention as if with approval the various proprietary articles offered to our profession, even if some of them have been looked at askance by the Council of Pharmacy and Chemistry of the A. M. A.

On page 95 one sees evidence of poor proofreading. On page 98 occurs this brilliant sentence: "The disturbances in metabolism accompanying a diet containing a large proportion of the wheat germ is apparently, in part, deficient for this reason."

Finally then, we believe the text will prove of considerable help to those who wish a collection of nutritional data. We hope that the authors will assimilate and evaluate the material presented, so that in later editions their readers may find consistent recommendations.

G. H. H.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee  
ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

NOVEMBER, 1917

Number 11

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION COMMITTEE { W. H. BREUER, M.D., Chairman  
S. P. CHILD, M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### PROGRESS IN OBSTETRICS\*

BUFORD G. HAMILTON, M.D.  
KANSAS CITY

It has been a source of pleasure to review the many papers written in 1916 and see the real progress that has been made. I know of no year in which more valuable material has been contributed than in the year past. To us it has been both local and general, and while the seed sown by obstetricians in the last few years has not brought forth a hundred fold, yet the increase has been gradual and good.

Lay people, as well as the medical profession, are being educated to the fact that obstetrics is a real branch of medicine. More women are reporting early for care during their carrying period and are becoming more educated as to what constitutes real care. Medical men are also realizing more that progress is being made and that they must observe and practice cleanliness. Physicians must wear rubber gloves, change their street clothes to duck suits worn only in these cases, use sterile material and make few examinations. They must have a knowledge of the position of the baby; a knowledge of the pelvis of the mother, and knowledge of the care of the mother before and after confinement. While we regret to say some medical men are still guilty of attending contagious diseases and doing obstetrics, yet, physicians who do not rise to the situation are to be reminded of the old King Belshazzar, who, while feasting and worshipping gold and silver images, was compelled to see the hand-writing on the wall, "Mene, mene, tekel upharsin," which when interpreted means, "Thou art weighed in the balance and found wanting." One of the most encouraging things to us is the number of women going to hospitals for confinement.

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

Never were there so many. Best of all, our hospitals have standards to follow which have been instituted by obstetrical men, and let me mention, to take patients to the different hospitals you must follow these standards or you cannot and will not be admitted.

We are indebted to Dr. Mosher for several very good papers. The first one on tuberculosis and pregnancy is a classic in itself, being comprehensive, and the conclusions reached being definite. Each case must be individualized. Symptoms of an acute nature, temperature, cough, hemorrhage, loss of weight, sweats, demand consultation at once, and abortion is to be considered. In absence of these indications, while we deplore the marriage of tuberculous women, and advise against pregnancy, if the patient presents herself, we cannot generalize. In the light of present day methods of treating tuberculosis, she is entitled to the same consideration as a nontuberculous patient. Our duty to these women is to cure their tuberculosis, not to murder their unborn children.

And while dealing with the question of abortion, the following report from the Kansas City General Hospital will be of interest. In a series of 125 cases, seventy-five showing temperature or hemorrhage, or both, were admitted and treated on the expectant plan but not curetted. The histories show that the patients were in the hospital from four to six days with only 5 per cent. complications, as compared with fifty other cases in which curettement was done as a routine, these patients being in the hospital on an average of twenty-two and one-half days, and 75 per cent. showing such complications as pelvic abscess, pelvic cellulitis, or general sepsis. This wonderful array of facts should be a warning against the routine use of the curette.

The second paper, "Present Day Indications for Forceps," is based on a long experience in forceps delivery, from which it is concluded:

1. Forceps should be used only where mother or child is in danger; they are not to be used promiscuously.

2. Only in head presentations.

3. Only where the head is engaged two-fifths of an inch; never as a high forceps operation.
4. Never on a breech presentation.
5. Forceps are preferred as against pituitary extract.
6. Cervix should be fully dilated.
7. Never to save time.

*Anesthetics.*—In regard to the ever-present problem of the safest anesthetic, some definite progress has been made in its solution. That very distinguished example of the feminist movement in medicine, Dr. Bertha Van Hoosen, has completed a series of 1,000 cases of scopolamin anesthesia, which have been reported in literature in detail. In this series, no untoward results were encountered, but the most satisfactory conditions of both mother and child attest to its being a hospital method which is to become more popular as it is further investigated in a scientific desire for the truth, and not in a preconceived attitude of prejudice.

Every anesthetic has its handicap. New York Lying-In Hospital reported a group of 100 cases, with another 100 as a control check without scopolamin, with most decided conclusions in favor of scopolamin, as regards freedom from shock, length of labor, safety to both patients, etc. Dr. Charles B. Reed, of Wesley Hospital, Chicago, has published a list of several hundred cases, with equally good findings. In the results of the work of Dr. Mosher, which includes 160 cases, there has been no mortality, either maternal or fetal. Not a single babe has been asphyxiated to require tubing and, case for case, the length of labor is slightly less than in other forms of anesthesia.

While it is concluded that nitrous oxid and oxygen make a good combination for extracting teeth, where temporary anesthesia is required, it has undoubtedly been associated with fatal results in a number of instances, vouched for by James L. Baldwin and other surgeons of note. In Mayo's and Ochsner's clinics, as is true with many other surgeons, nitrous oxid has been abandoned for ether, after an unprejudiced effort to adopt nitrous oxid. The use of gas to begin anesthesia, switching to ether for the principal dependant, is still followed in many hospitals where expert and skilful anesthetists are available. Chloroform is becoming less and less the favorite, even in home cases, owing to the frequent untoward results. The consensus of opinion where inhalation anesthesia is used is in favor of ether by the drop method.

Probably nothing has been said or done that has contributed more to obstetrics recently than rectal examinations. While we agree with Holmes that abdominal examination, together with proper interpretations of clinical evidence, is to be more relied on than vaginal examination, yet it is necessary to make examinations;

and without doubt rectal examination offers the least chance for infection. We are aware that vaginal examinations are necessary at times, especially when interference is necessary, but practice with rectal examinations will reduce vaginal examination to a minimum. If one is familiar from external examination with the position of the babe, has made pelvic examination beforehand, and will watch fetal heart action, remembering that a fetal heart over 150 or below 120, or irregular in character, is doing badly, there will be little cause for examination, either rectal or vaginal. Special care should be taken in making rectal examination. The patient should be shaved or clipped, an enema should be given, and the parts cleansed with soap and water, and followed by a 2 per cent. lysol solution. The examiner should use a sterile rubber glove, and examination should be followed by a careful cleansing of the parts. I prefer the patient on the side, for in this position the examiner's hand does not come in contact with the vulva.

#### *Some of the Advantages of Rectal Examination.*—

1. In border-line cases where cesarean section is to be considered, infection is reduced to a minimum.

2. It is more easily done when the examiner is in a hurry or wants to determine whether it is necessary to stay with the patient.

3. Rectal examination, when carefully done, is more agreeable to patients; at least, they complain less. It is a protection to the physician when infection follows delivery. To those men who are using rectal examination, there is no argument, but to those who do not, we suggest urgently that it be given an honest, thorough trial, for certainly no progressive man can fail to take advantage of any means or method that will lessen the chance of infection of his patient.

*On Prevention of Rectocele, Cystocele and Retroversion.*—Much has been written, but when all is said, we must be convinced that such complications are caused from poor repair of the perineum. Modern men who have studied and dissected the parts are convinced that most repair work can be done at once, and if done along anatomical lines perfect results may be expected in 95 per cent. of all cases. I am indebted to Dr. Howard Hill for valuable instructions in the repair of the perineum. The following simple method when followed gives most happy results:

1. The muscles are brought together with interrupted sutures but not tied. These when brought together appear as two columns.

2. The mucous membrane of the floor of the vagina is accurately brought together by a con-



tinuous suture to the mucocutaneous junction thereby forming a water shed for the lochia.

3. The muscles are now tied.

4. The torn triangular ligament or urogenital trigone is brought over the muscles by interrupted catgut sutures. Over this the skin is sutured, catgut number two being used throughout the repair of the perineum.

5. The labia are now seen in close apposition as before the tear. There is never very much swelling of parts. If this plan is followed with proper care during the puerperium, the percentage of retroversion, cystocele and rectocele will be reduced to a minimum.

*Pituitary Extract.*—I know of nothing in obstetrics that is being less intelligently used than pituitary extract. Its routine use is to be deplored. The literature of the day is full of accidents both to mother and babe. The following are the generally accepted indications for its use:

1. Multipara, with cervix fully dilated, head engaged and rotated anterior, with inertia or lagging pains.

2. In cases of gaseous distention of the bowels, the upper intestine and stomach being empty, especially following cesarean section, pituitary extract produces marked results.

3. In cases with retention of urine, the use of the catheter is lessened.

4. In atonic condition of the uterus with hemorrhage, where the placenta has not been expelled, it does not produce an hourglass contraction as does ergot.

5. Following cesarean section for hasty contraction, where it should be followed by ergot.

6. We are reminded of one paragraph of Dr. Mosher's paper on the abuse of pituitary extract, which should be taken as an axiom. It has no place in normal labor, nor in any case where there is an abnormality in presentation, nor where there is pelvic distorsion.

Probably nothing tries the diagnostic ability of medical men in general more than tubal pregnancy. After reviewing some five hundred cases in the literature of 1916, we find a few symptoms that occur in most cases and are of sufficient import to be worthy of our careful consideration. One of two things usually brings the patient to our notice: first, pain or irregular bleeding; second, peculiar menstruation, or a feeling of the patient that something is wrong.

*Symptoms.*—Pain is described as acute or subacute:

1. The acute occurring with rupture or erosion.

2. Subacute is described as colicky, cramping or paroxysmal in character, especially if no former inflammatory mass exists. Painful de-

fecation followed in some cases by bleeding, is often referred along the limb of the affected side, and is out of proportion to the rigidity of the rectus muscles and tenderness on the affected side.

Bleeding occurs in several ways: menstruation not as usual, the patient states; lasts longer; blood darker, less clotting; more pain on one side; often after an interval, notices a spotting of garments or gush of blood only to be followed by an intermission of a short time. If time has passed, they state that they have been bleeding or passing blood since their last menstruation. As time passes, the patient notices a relation between pain and gush of blood. There is seldom odor.

3. Pulse and temperature elevated some time during the condition.

4. Rectal and vesical tenesmus, with bleeding after a time; there is lessening of red cells and an increase in the white cells, especially the polys.

5. With loss of blood, there is a lowering of blood pressures.

6. Albumen, with hyaline and granular casts, is a frequent symptom.

7. Bimanual examination shows uterus most often in normal position in contrast to the fixed or retroverted condition, which exists with inflamed condition of adnexia. Pushing of the cervix from side to side will elicit pain on the affected side; mass usually to be felt to the side or the back of the uterus; tenderness with pulsation of the uterine artery marked. With rupture or erosion, the symptoms differ. Sharp pain with collapse; cold, clammy skin, rapid pulse, subnormal temperature and decreasing blood-pressure tell the story.

*Toxemias of Pregnancy.*—Two papers, one by Williamson and one by Loosee, attempt to show the similarity of toxemia to acidosis. Both, after extensive examination of blood and urine, state that toxemia of pregnancy is not an acidosis but that there is a similarity in symptoms, so much so that sodium acetate, sodium carbonate, and sugars, lemonade and such have been used with happy results. Both urgently recommend such treatment. Williamson draws some conclusions which are of interest:

1. Chloroform should never be used, because of its causing an increase of the symptoms, besides an increase of acidosis.

2. Calomel or mercury preparations should never be used. Lesions from mercury poisoning are the same as those of toxemia of pregnancy. It is probable that the lesions are still further increased.

3. Mercurial douches should not be used for the same reason.

4. When a pregnant woman suffering from a chronic nephritis shows symptoms of acidosis, the uterus should be emptied without delay. Prognosis in such cases is very grave. In pernicious vomiting, I. C. Hirst recommends extract of corpus luteum in 1 c.cm. doses daily, increasing it if necessary. Treatment of eclampsia on general lines is the same, yet we note how conservative the many writers are. There is no doubt that a large percentage may be prevented in patients reporting early; but in those cases where they do not and are so unfortunate as to have convulsions, morphin in large doses, elimination, bleeding, veratrum viride, and waiting is most often followed by happy results. Most of the papers are against the manual dilatation of the cervix, or the use of high forceps and recommend starting labor when necessary with the various bags.

*Blood-Pressure and Pregnancy.*—Of 5,000 cases at the Boston Lying-In Hospital the following results were found: 80 per cent. showed 100 to 130 (systolic); 9 per cent. below 100; 11 per cent. 130 or more. In young women high blood-pressure is a signal of toxemia, often before albumen is found. In most cases of eclampsia the blood-pressure is over 160.

*Indication for Cesarean Section.*—Probably as much has been written on this subject as any one subject during the year. There is probably no question in obstetrics that demands sounder judgment than when to determine that a case is indeed cesarean. We are reminded by Holmes of Chicago that there is really only one indication for cesarean—namely, contracted pelvis where it is impossible to secure a living child by any other means. He gives us an indication when the anteroposterior diameter is down to 6.5 cm.

In most cases in which cesarean sections have already been done; for it is a generally accepted fact, that, once a cesarean is always a cesarean. A patient should be given a test of labor regardless of indications. In placenta previa in young women, where bleeding is alarming and the cervix is hard and impossible to dilate manually, cesarean section is the operation of choice. It is generally accepted that most eclamptic patients should not have cesarean sections done; those cases obstructed by tumors, or those cases with tumors of the body of the uterus, weakening the walls so much that rupture might follow. In those persistent posterior positions in which the bag of water ruptures prematurely, the cervix not dilating, the patient having been given a test of labor, we believe that cesarean section is indicated. In those cases of breech presentation where there is a large baby, a para one where there is a rigid small vagina, a cesarean is often the operation of choice. It is often necessary to determine whether version or cesarean section is indicated. In those cases in which the cervix

is fully dilated, the bag of water not ruptured, moderate size baby, version is probably the operation of choice. However, in determining which is the safer procedure, the condition of the perineum must be taken into consideration, whether the patient is a para one, or a multiple para. In cases with rigid short perineum, the deep tears that necessarily follow and the danger to the baby itself, make it a serious question as to whether cesarean section should be done. In our opinion, cesarean section is preferable to a third degree tear which frequently follows versions.

The great plea that we make is that every woman should be given an intelligent test of labor, and that our indications be well founded. For truly, none of our work calls for sounder, saner judgment than to say that a cesarean section is indicated in a given case. May we also add that care should be taken that the mother is not thoroughly exhausted, that no vaginal examinations be made, nor an attempt at delivery be done. For no doubt, the happiest results are obtained when the mother is still in good condition, with the least chance for infection.

816 Lathrop Building.

#### DISCUSSION

DR. C. LESTER HALL, Kansas City: Of course, to one who like myself is somewhat of a by-gone in obstetrical work, a great many things are suggested nowadays that are a little hard for one to believe, and I am somewhat given to the practice that I have followed for fifty years. As for asepsis and cleanliness, no one pretends to be in anything else than an aseptic state when waiting on a patient in confinement and should not when attending any other condition. A man ought to be born clean. Every physician ought to know what dirt is and what cleanliness is and ought almost to be expected to wash his hands when he looks at a patient's tongue; and he must be a crank and an everlasting nuisance to people, to do his duty, because if he does not get in the habit of cleansing himself in every way, then he has no business in medicine.

I am aware that there has been a belief prevailing for some years that a patient should not be examined vaginally. If I have to give up vaginal examinations I will quit the business entirely. I know the route of birth, and I know that I must measure the pelvis not only from the outside of the bones but within the pelvic cavity. I have got to know the dimensions and whether the diameter between the pubic arch is sufficient. I have got to know the presentation of the child, and I want to say now that I believe I know less about the presentation of a child than when I was a very young doctor. I used to know, or thought I knew, to perfection; but now, I confess, I am often confused and, in fact, when I think it is the child's head it is sometimes the other end. The vaginal examination is, I think, when the vagina is properly sterilized with sterile water and lysol and your hands are encased in clean gloves, a most necessary and valuable thing. But if I were going to depend so much as this young man, for whom I have a high regard, on rectal examination instead of vaginal examination I want you to bring me a dozen pairs of gloves. I would not trust the best nurse in the world to always give me the right pair of gloves, not even if they are marked "V" and "R." When you mix up the gloves for the rectal examination with those for the vaginal in your work I do not consider it very safe for the patient.



It is not that I do not feel the value of rectal examination. As a gynecologist I have learned its usefulness in ascertaining the position of the pelvic organs and I practice it almost daily. But I feel that the old practitioner, who sat down by the side of his patient, and observing absolute cleanliness, as far as it is possible to have cleanliness, and would occasionally make an examination to see how the patient was progressing and in the extreme pains to apparently help the woman, as I believe he does help her, accomplished a very necessary, helpful and humane purpose. I believe that the hand introduced into the vagina, even the doubled up fist after it is fully introduced, has a great deal to do, under careful management, in dilating the vagina, the parturient canal, the only canal that the child will be born through unless you do a cesarean section. I believe that the man who will do that does his duty. I believe that the man who does that will help his patient, and whether he helps her or not he certainly produces a good psychical effect on the mother. The poor woman is suffering, and it helps her to know that somebody is standing by her. I certainly believe that it is possible to help the woman suffering in childbirth with your manual dexterity, your manipulation, not roughly done, not carelessly done, not in a way to produce traumatism, but with tender, delicate care; I believe that it is possible to help her by vaginal examination.

There is much in the paper to be highly commended. His idea of the suit of clothes is excellent. I use a white suit (I have never got down to the pajamas) but I use the gown when I go to these cases. Dr. Hamilton has mentioned many good points, and I know his work and have confidence in him. Where I differ from him, it is only because of my own experience with these cases, of which I am unfortunate enough still to have some.

I may add here that I repair my perineums at once; do not go home and go to sleep and come back the next day to attend to them. I have learned not to trust the nurse to look after what is necessary, but to see myself that all is in good shape.

DR. B. G. HAMILTON, Kansas City, closing: I have been a great admirer of Dr. Hall since I have been in Kansas City. I hate to go against his teaching, but I am afraid that my former statement must stand in my opinion. I have gone through that stage of dilating, and with all respect to Dr. Hall I think the most that I have ever accomplished has been to cause discomfort to the patient and increase the chances for infection.

In regard to vaginal examination, if you will ask any man who does any great amount of surgery you will get but the one answer, I believe. I had two cases at the hospital recently, one coming from our own city and one coming in from the country, on whom vaginal examinations had been made. After cesarean section the latter woman died. In another that I saw, an attempt at forceps delivery had been made; the woman died. It is an accepted fact at almost all the clinics in the country that those who die from infection are those who have been manually handled in some way. It has been my unfortunate experience to be present at and to have had seven cesarean sections in the last year; none of those patients ran any temperature to speak of, none were ever examined vaginally.

I personally have not examined a woman vaginally for other than forceps or version, in the last year and a half. We have twenty-five cases a month in Kansas City at the General Hospital, and I suppose that I have examined in the time I have mentioned something like 200 to 250 women. We have had very few cases of sepsis in that time and the one plea that we make is for cleanliness and for separating the practice of obstetrics from just medicine of which it has been a part for some time. It is not difficult to accustom oneself to this method; try the rectal examination and you soon will become proficient in it.

## LUMBAR PUNCTURE IN ALCOHOLISM\*

FRANCIS M. BARNES, JR., M.D.

AND

EMIL E. HEIN, M.D.

ST. LOUIS

Since the introduction of lumbar puncture for the examination of the spinal fluid as a diagnostic measure some fifteen years ago, there has been a rather evident tendency to overlook and minimize the therapeutic value of this procedure. The tapping of various body cavities first came into custom for therapeutic purposes and it was in hydrocephalus that Quincke<sup>1</sup> first performed lumbar puncture as a mode of treatment, this operation being intended to replace the more serious one of trephination previously practiced. Since Quincke first introduced the procedure we find that it has been used with more or less success in numerous connections as a therapeutic measure—in uremia, heatstroke, meningismus and meningitis of infectious, tubercular and serous type, hemorrhagic pachymeningitis, hydrocephalus, trauma of the skull, papillitis, brain tumor, etc..<sup>2</sup> Szedlik<sup>3</sup> recommends it in the alleviation of excitement in various psychoses, such as paresis, dementia praecox, melancholia and epileptic psychoses. More recently Musser and Hufford<sup>4</sup> have used it in the relief of delirium in lobar pneumonia.

Of the therapeutic value of this operation in certain conditions there can be no question. As to the way in which the therapeutic end is brought about there is much discussion and disagreement of opinion. In general, there are two groups of opinions as to the manner by which beneficial results are effected. First, the reduction in pressure, merely mechanical, and second, the removal of deleterious substances, biological and chemical. In some instances it is agreed that both of these factors come into play. In an analysis of the causes of fluid formation in body cavities in general the following general propositions have been set forth:<sup>5</sup> We find increased amount of these fluids due to (1) increased flow of lymph; (2) increased secretory action of the endothelium; (3) increased permeability of the blood vessels because of stasis or inflammation. On the other hand, we find decreased amounts due to the somewhat oppo-

\* Read at the Regular Meeting of the St. Louis Neurological Society held at the Glenwood Sanitarium, St. Louis, May 28, 1917.

1. Quincke: Ueber Hydrocephalus. Verhandl. des Congresses für Innere Med., 1891, x, 321-340.

2. Rehm: Der therapeutische Einfluss der Lumbalpunktion, Fortsch. d. Med., 1914, xxxii, 117-124.

3. Szedlik: Die Lumbalpunktion des Erregungsmildernder Eingriff, Ref. in Ztschr. f. d. ges. Neurol. u. Psychiat., 1914, ix, 305.

4. Musser and Hufford: Lumbar Puncture for the Relief of Delirium in Lobar Pneumonia, Jour. A. M. A., 1917, lxviii, 1231.

5. Quincke: Ueber die therapeutischen Leistungen der Lumbalpunktion, Therap. Monatshefte, 1914, xxviii, 469.

site factors of (1) impaired lymph path conduction; (2) decreased absorptive activity of the endothelium, and (3) decreased absorption by the blood vessels. Assuming those in general to be the causes of increase and decrease in amount of fluid, by what process, may we ask, is it that repeated or single punctures produce a decrease or entire disappearance of an accumulation of fluid in a body cavity? There are several reasons why this may be, all or one of which theoretically may become operative singly or collectively in a given case. The alteration or improvement in the condition may be due to the fact that (1) the original disease process has largely recovered; (2) micro-organisms, toxins and the like have been removed; (3) hindrance of a mechanical sort has been done away with; (4) by the removal of the fluid accumulation certain changes are brought about in the endothelium itself.

When we come to study the formation, circulation and function of the cerebrospinal fluid in conditions of health and disease we meet with a quite different and special problem from that which confronts us in the formation of other fluids. We know less about the spinal fluid than is sufficient to answer the various questions that may easily be raised. Of the factors which have occupied a great deal of space in the discussion of the formation of the spinal fluid and alterations in its amount in pathological conditions, the choroid plexus and vascular system are most prominent. It would take us too far to enter at this time into a consideration of the details of this situation, and therefore only a few points will be mentioned such as seem to have a direct bearing on the special problem which we have under reference.

It has been shown that an extract of the choroid plexus will increase the flow of spinal fluid when injected intravenously into Dogs 6, fluid when injected intravenously into dogs<sup>6,7,8,9</sup> coincidentally with a fall in the blood pressure. And further, it has been observed that the cerebrospinal fluid from certain pathological cases (paresis and alcoholism) when injected into dogs will cause similar results and it is assumed that this action is due either to the content of choroid or its active principle in such fluids. Many substances besides choroid, such as chloroform, ether and alcohol experimentally,<sup>6,7</sup> produce marked increase in cerebrospinal fluid flow. It is not considered, however,

that this is entirely dependent on the changes in the blood pressure brought about by these substances, the choroid especially being looked on as almost specific in some way. That there is a close relationship between the blood pressure and cerebrospinal fluid pressure and amount is conceded, but that these two are absolutely interdependent and reciprocal is probably not the case. Dixon and Halliburton,<sup>6,7</sup> after a most careful and painstaking research, are of the opinion that the cerebrospinal pressure is not greatly affected by circulatory changes except perhaps when it happens to be very high. It is an independent pressure and the factors determining its height are dependent on the rate of secretion and the rate of absorption of the fluid. These same observers found that alcohol caused very little and often no fall in arterial blood pressure or rise in venous and yet it does cause some slight increase in the cerebrospinal fluid pressure, and they think it clearly wrong to imagine that the cerebrospinal fluid pressure must equal that of the cerebral venous pressure unless it be under certain changed conditions of (high) pressure in the cerebrospinal fluid. Marked changes in the general arterial and venous circulation may cause marked changes in the cerebral venous pressure, but have very little effect on the cerebrospinal fluid pressure. A rise in blood pressure caused by compression of the aorta produces a rise in the cerebrospinal fluid pressure, but such vascular changes do not increase the rate of flow of the cerebrospinal fluid. It is sometimes suggested that such vascular changes either prevent absorption of cerebrospinal fluid or increase its secretion and thus act to keep its pressure high. An increase in the cerebrospinal fluid pressure causes an increase (passive) in the cerebral venous pressure; whereas, increasing the latter increased the former but slightly. In conclusion, they think the cranial contents cannot any longer be regarded as a fixed quantity without the power of expanding or contracting in volume. The cerebrospinal pressure is influenced possibly to a small extent by changes in the arterial and venous pressure, but such alterations are insignificant compared with the independent changes in pressure which occur as the result of secretory activity.

The previous work has all been experimental. Clinical observations have been somewhat more conflicting, though there has been a certain amount of agreement in the results. Quinke<sup>5</sup> states that an increase in the amount of spinal fluid brings about an increase in the pressure of the fluid, and this impedes the circulation. The fluid comes mostly from the choroid plexus, but also is secreted by the lymph, blood and endothelium of other places. In absorption the blood plays a small part. Pathologically, we

6. Dixon and Halliburton: The Cerebrospinal Fluid, I, Secretion of the Fluid, *Jour. of Physiol.*, 1913, xlvii, 215-242.

7. Dixon and Halliburton: The Cerebrospinal Fluid, II, Cerebral Ventricles and Its Relation to That of the Pituitary Gland, *J. A. M. A.*, 1911, lvi, 265-268.

8. Kramer: The Function of the Choroid Plexus of the Cerebral Ventricles and Its Relation to that of the Pituitary Gland, *J. A. M. A.*, 1911, lvi, 265-268.

9. On the Function of the Choroid Glands (choroid plexuses) of the Cerebral Ventricles and Its Relation to the Toxicity of Cerebrospinal Fluid, *Brain*, 1912, xxxiv, 39-44.



find<sup>10</sup> an increase in cerebrospinal fluid pressure in all inflammatory conditions in the cerebrospinal canal associated with increased fluid production, in processes encroaching on space, hydrocephalus, hemorrhage, tumor, abscess and also in other diseased states, such as acute alcoholism, eclampsia and epilepsy during a seizure. Normal physiological variations in cerebrospinal fluid pressure must not be forgotten, these occurring synchronously with respiration up to 20 mm., and pulse up to 5 mm., the latter depending probably on changes in the basal arteries.

In view of the effect of alcohol consumption on the blood pressure and the possible relationship which blood pressure and cerebrospinal fluid pressure bear to one another, some clinical observations along this line are important and interesting. John,<sup>11</sup> in a purely experimental study of the effect of alcohol on the blood pressure, and Raff,<sup>12</sup> from a clinical study, reached much the same conclusions, which the latter observer summarizes as follows: (1) A quite marked rise occurs in the systolic blood pressure in the first days of alcoholism, which in some cases goes still higher a day or so after admission, and then gradually falls in three to eight days. (2) There is an almost constant level in the diastolic pressure maintained throughout the entire disease so that the rise in pulse pressure appears to be entirely due to the increase in the systolic pressure. These peculiarities of blood pressure curve are so constant that they may be used as an aid in diagnosis. Dogiel,<sup>13</sup> from an experimental study in which the effect on blood pressure noted by the preceding two observers was corroborated, concluded that the effect of alcohol on the nervous system was direct and not by way of changes in the blood pressure or circulation. Holzmann<sup>14</sup> experimentally found that at first there was a rise in systolic pressure, but from a clinical study of drunks brought into the clinic he reached the following conclusions: From the effect of alcohol there occurs a fall in the systolic pressure, a rise or fall in diastolic pressure, a lessening of pulse pressure and an increase in pulse frequency.

When we come to look more closely to the results which have been obtained in the clinical study of the spinal fluid in persons suffering from excessive use of alcohol we meet with in-

teresting findings. Quinke<sup>15</sup> first recognized the pathological conditions of the spinal fluid in those cases of serous meningitis attributable to alcoholism, although he did not lay especial emphasis on the alcohol so much as on the serous meningitis. A few years later Dana,<sup>16</sup> in his paper on acute serous meningitis of alcoholic origin, or as he called it, alcoholic wet-brain, called attention to the fact that it was not so much a serous meningitis with which one had to deal in these conditions as it was a toxemia leading to congestion, then to an edema, both of the brain and its membranes, with a moderate serous effusion into the ventricles and decided disorganization of the brain elements. In these conditions Dana found that lumbar puncture sometimes did good but usually only temporarily, though occasionally the benefit was permanent.

Following the work of Dana and Quinke, previously referred to, Finkelnburg<sup>17</sup> came to the conclusion that the increased cerebrospinal fluid pressure was due to an increased secretion and delayed absorption. Whether this increase in secretion is due to a kind of lymphagogue action or to the toxic irritation action on the secretory cells, especially those of the choroid plexus, is not certain, but Finkelnburg inclined more to the latter explanation. This writer is of the opinion that the alcohol produces a kind of acute hydrocephalus and that the toxic action of alcohol on the nerve tissue and the increased cerebrospinal fluid pressure both may act to cause such hydrocephalus. Schottmüller and Schumm,<sup>18</sup> working on cases of acute alcoholic intoxication without delirium, found a high pressure and increased amount of cerebrospinal fluid almost invariably. In nearly all of their cases the spinal fluid examined for the presence of alcohol or its aldehyde oxidation products gave positive results. Alcohol was found by them in the spinal fluid of a chronic alcoholic four days after admission.

Steinebach<sup>19</sup> worked with delirium tremens only and in 78 per cent. of his cases<sup>18</sup> found a much increased cerebrospinal fluid pressure. He did not find this in cases after the delirium had subsided nor was it present in the chronic alcoholics. Therefore, he concluded that it is a feature of the delirium itself. In 22 per cent. (4 cases) normal cerebrospinal fluid was found, but this normality was more relative than abso-

10. Allard: Die Lumbalpunktion, *Ergebn. d. innere Med. u. Kinderheilk.*, 1909, iii, 100-138.

11. John: Ueber die Beeinflussung des systolischen und diastolischen Blutdrucks durch Genuss alkoholischer Getränke verschiedener Concentration, *Ztschr. f. Experiment. Path. u. Therap.*, 1908, v, 579-606.

12. Raff: Blutdruckmessung bei Alkoholikern und funktionellen Neurosen unter Anschluss von Kreislaufstörungen, *Deutsch. Arch. f. klin. Med.*, 1913, cxii, 209-230.

13. Dogiel: Über einige einatomige gesättigte Alkohole ein pharmakologischer Beziehung, *Pflüger's Arch. f. d. ges. Physiol.*, 1874, viii, 604-607.

14. Holzmann: Blutdruck bei Alkoholberauschten, *Arch. f. Psych. u. Nervenkr.*, 1909, xlv, 92-133.

15. Quinke: Ueber Meningitis Serosa, *Volkman's klinische Vortr.*, 1893, March, No. 67, 655-694.

16. Dana: Acute Serous Meningitis (Alcoholic meningitis, wet-brain), *Med. Record*, 1897, lii, 801-802.

17. Finkelnburg, R.: Experimentelle Untersuchung über den Einfluss des Alkohols auf den Hirn-Rückenmarksdruk, *Deutsch. Arch. f. klin. Med.*, 1904, lxxx, 130-142.

18. Schottmüller and Schumm: Nachweis von Alkohol in der Spinalflüssigkeit von Säufnern, *Neurol. Centralbl.*, 1912, xxxi, 1020-1023.

19. Steinebach, R.: Ueber die Zerebrospinalflüssigkeit und ueber die Wirkung der Lumbalpunktion beim Delirium potatorum, *Deutsche Med. Wchschr.*, 1915, xli, 369-372.

lute. Of 16 of his cases tested, the spinal fluid of 12 showed that alcohol was present. This decreased at subsequent punctures, that is, the alcohol in the fluid depends on how long a time has elapsed since the patient consumed alcohol and not on the delirium itself. Steinebach found the therapeutic effect of puncture most marked. The average case of delirium tremens in his experience showed four restless days and five days of delirium, but in those where lumbar puncture was done the former is decreased to 75 per cent. and the delirium to 60 per cent. The earlier in the course of the disease the puncture is done the better are the results, although good results may be obtained even in the later stages. From a therapeutic standpoint he considers the puncture very valuable also because of the weak heart, in cases of fracture, pneumonia and the like. No bad results from the puncture were noted in any case. Steinebach's explanation of the pathogenesis of delirium tremens is that there is the production of a toxin, the irritant action of which on the cerebrospinal membranes causes an increase in secretion and delay in absorption and thus results the increase in the amount of fluid and the rise in pressure. The alcohol does not directly cause the delirium as the latter may develop in a period of abstinence. In other words the delirium is due to a toxin produced in turn by the alcohol. Steinebach thinks the lumbar puncture may work favorably by opening the paths of absorption in the sense used by Quincke. However, in view of the fact that replacement of the spinal fluid by salt solution gives even better results, he believes that this indicates that a part of the toxin is also removed by the puncture, while the remainder is diluted by the salt solution. Kramer<sup>20</sup> has a somewhat similar idea of the situation and in addition advocates the replacement of the spinal fluid removed by a sodium bromide solution. The more recent work of Nuzum and Le Count<sup>21</sup> has shown that the brain of the alcoholic possesses a much higher hydration capacity than the normal and they attribute this to tissue asphyxia and resultant accumulation of acids. Hogan<sup>22</sup> likewise believes that all cases of delirium tremens suffer from an acid intoxication and bases his treatment by intravenous injections of neutralizing salts on this. Leonard<sup>23</sup> has obtained good results in his cases by replacing the withdrawn spinal fluid by a 25 per cent. solution of magnesium sulphate.

20. Kramer: On the Treatment of Delirium Tremens by the Subdural Injection of Sodium Bromide, *Best. Med. and Surg. J.*, 1913, clxix, 646-647.

21. Nuzum and Le Count, E. R.: The Ability of Brain Tissue to Take up Water in Delirium Tremens and Other Conditions, *J. A. M. A.*, 1916, lxxvii, 1822-1826.

22. Hogan, J. J.: Treatment of Acute Alcoholic Delirium, *J. A. M. A.*, 1916, lxxvii, 1826-1829.

23. Leonard, E. A., Jr.: Intraspinal Injections of Magnesium Sulphate in Delirium Tremens, *J. A. M. A.*, 1916, lxxvii, 509.

By this more recent trend in the study of alcoholism the question of the final factor in the production of delirium tremens has been brought up anew.<sup>24</sup> Chronic alcoholic poisoning produces well-known changes in the central and peripheral nervous system. Among these are vacuolization and high grade degeneration of the nerve cells with atrophy and shriveling; fatty infiltration of the medullary substance; dissolution of the chromatin structure; inflammatory infiltration of the pia; internal hydrocephalus, and degeneration of the peripheral nerves. Cases of delirium tremens may present the same changes, or the chronic changes may be of higher grade. Even instances of Korsakoff's psychosis may differ from chronic alcoholism only in a more severe change in the ganglion cells. As yet, however, no changes have been found in the brain which explain why a man who has been drinking for years suddenly develops a delirium which runs a definite course of from three to five days or even longer. It has been thought that delirium tremens is an acute infection occurring in chronic alcoholics. Nevertheless, many cases run their entire course without fever, and Nonne<sup>25</sup> found blood cultures negative in fifteen consecutive cases examined by him. Döllken<sup>26</sup> believes that continued drinking of alcohol results in the production of a poisonous substance in the brain itself, and that an accumulation or concentration of this substance produces delirium tremens. Jacobson<sup>27</sup> explains the delirium as an autointoxication, the toxin arising from the pneumococcus gaining entrance through the liver, the kidney or the intestinal tract, and acting on a brain which has been poisoned over a long period of time by alcohol. The view of Hertz<sup>28</sup> differs from this in that the supposed poison which precipitates the delirium comes from an insufficiency on the part of the kidney, this in turn being due to the acute nephritis which usually accompanies delirium tremens. That albuminuria is present and seemingly dependent on this delirium was long ago maintained by Fürstner<sup>29</sup> and has been noted repeatedly since. According to Bonhoeffer<sup>30</sup> chronic alteration in the intestinal tract is responsible for the elaboration of poison which

24. Theories of Delirium Tremens, Editorial, *J. A. M. A.*, 1915, lxx, 2090.

25. Nonne: Bakteriologische Blutuntersuchung bei Delirium Tremens, *Allg. Ztschr. f. Psychiat.*, 1904, lxi, 220.

26. Döllken: Die körperlichen Erscheinungen des Delirium Tremens, Leipzig, 1901.

27. Jacobson: Ueber die Pathogenese des Delirium Tremens, *Allg. Ztschr. f. Psychiat.*, 1854, xi, 221.

28. Hertz: Pathogenese von Delirium Tremens, *Neurol. Centralbl.*, 1901, xx, 524.

29. Fürstner: Ueber Albuminurie bei Alkoholisten, *Arch. f. Psychiat.*, 1815-1816, vi, 755.

30. Bonhoeffer: Klinische und anatomische Beiträge zur Kenntnis der Alkoholdelirien, *Monatschr. f. Psychiat. u. Neurol.*, 1895, i, 129; Pathologische und anatomische Untersuchungen an Alkoholdeliranten, *ibid.*, 1899, v, 379.



is normally excreted through the lungs. In diseases of the lungs, and especially in pneumonia, an altered gas exchange occurs, the excretion of this poison is hindered and delirium tremens is the result. Wagner von Jauregg<sup>31</sup> believes that the liver rather than the lungs is the organ which fails to eliminate the poison elaborated in the gastro-intestinal tract, and he thinks that this failure is due to the changes occurring in the liver in chronic alcoholism. Kauffmann<sup>32</sup> has asserted that this poison is a carbon derivative acting on a medulla altered as a result of chronic alcoholism. He believes that the delirium will persist until the production of this carbon derivative stops.

All of these theories demand as a preliminary condition a poisoned and permanently altered central nervous system on which a poison acts. The objection is raised that many chronic drinkers develop marked brain and visceral changes and yet never suffer a delirium. In answer it has been suggested that, in patients who acquire delirium tremens, the brain has undergone some special change. As a result of this change an autointoxication produces a delirium; or one may assume the view of Raimann,<sup>33</sup> that for each poison elaborated in chronic drinkers a special psychosis results. Thus one poison causes delirium tremens, a second Korsakoff's psychosis, and a third the poliomyelitis superior acuta of Wernicke. There are two other theories of special interest, the first on account of its ingenuity, the second on account of its bearing on statistical evidence. Jauregg,<sup>34</sup> of Vienna, assumes that the body of chronic alcoholics protects itself by the production of an antialcohol which is of the nature of an antitoxin. When a hard drinker suddenly stops taking alcohol, this anti-alcoholic substance, having no alcohol to which to affix itself, acts on the body in such a manner as to produce delirium tremens. Hare<sup>35</sup> maintains that the development of delirium is due to a sudden fall in the amount of alcohol circulating in the blood of alcoholics. His evidence is drawn from a study of seventy-five cases of delirium tremens, in nearly all of which there was a great reduction in the amount of alcohol absorbed prior to the onset of delirium. In many of these instances the alcohol was withheld; in others vomiting prevented its absorption. Numerous objections have been raised

to each of these theories. The views concerning poisons and autointoxications have been vigorously attacked because there is as yet no definite proof that a poison is elaborated.

Although there may be considerable room for discussion as to the mechanism through which changes in the spinal fluid are occasioned by alcoholism and while we may as yet be in doubt as to the mechanism by which the removal of the spinal fluid by lumbar puncture benefits these patients, there can be no question as to the improvement resulting from this method of treatment. It is largely from the practical and therapeutic standpoint that this work has been carried out. If there was anything to the claims that lumbar puncture was an advantageous therapeutic measure in these conditions it was thought that the large material of this class admitted to the City Hospital would offer a good field for its use.

The operation of lumbar puncture itself is a comparatively simple procedure. However, the measurement of cerebrospinal fluid pressure and the instruments which have been so far devised whereby this may be accomplished have been so far to a large extent uncertain and unsatisfactory. This has been most recently called attention to by Landon.<sup>36</sup> He points out that the normal pressure has been stated by Adamkiewicz to be from 80 to 100 mm. of water; by Key and Retzius, from 160 to 200 mm.; by Quincke, from 40 to 60 mm.; by Koenig, from 120 to 150 mm., there being a variation in these statements from 40 to 160 mm. of water as a minimum to from 60 to 200 mm. as a maximum. He adds that it is inconceivable that under normal conditions such latitudes of pressure are possible. Most of the methods so far devised have measured the pressure in water terms. Most modifications of instruments have dealt with minor details regarding the needle and by-pass valves. These attempts are illustrated in the instruments as devised by Elbright,<sup>37</sup> Kausch,<sup>38</sup> Crohn,<sup>39</sup> Wolfsohn<sup>40, 41</sup> and Mayer.<sup>42</sup> All of these have some defect or drawback. The instrument devised by Landon uses the ordinary U-tube mercury manometer and great advantages are claimed for it by its originator. In this work

36. Landon: The Absolute Determination of Intracranial Pressure, *J. A. M. A.*, 1917, lxviii, 1540-1542.

37. Elbright: Lumbar Puncture in Diagnosis and Therapeutics, *J. A. M. A.*, 1908, li, 1566-1568.

38. Kausch: Ein Instrument zur lumbalen Punktion, Injektion und Druckmessung und ein Verfahren der Letzteren, *Deutsche Med. Wchnschr.*, 1908, xxxiv, 2217-2219.

39. Crohn: An Improved Apparatus for Estimating the Pressure in the Cerebrospinal System, *J. A. M. A.*, 1911, lvi, 962-964.

40. Wolfsohn: A New Lumbar Puncture Needle, *J. A. M. A.*, 1913, ix, 1204-1205.

41. Wolfsohn: An Improved Lumbar Puncture Needle, *J. A. M. A.*, 1915, lxxv, 2164.

42. Mayer: Eine neue Lumbalpunktionkanüle zur Verhütung plötzlicher Druckerniedrigung und für exakte Druckmessung, *Deutsche Med. Wchnschr.*, 1914, xl, 81.

31. Von Jauregg: Die Giftwirkung des Alkohols bei einigen nervösen und psychischen Erkrankungen, *Wien. klin. Wchnschr.*, 1901, xiv, 359.

32. Kauffmann: Stoffwechseluntersuchungen bei Alkohol-deliranten, *Jahrb. f. Psychol. u. Neurol.*, 1908, x, 22.

33. Raimann: Beiträge zur Lehre von den Alkohol Augenmuskellähmungen, *Jahrb. f. Psychiat. u. Neurol.*, 1890, xx, 136.

34. Lumbar Puncture in Delirium Tremens, Editorial, *J. A. M. A.*, Oct. 30, 1915, p. 1557.

35. Hare: Alcoholism, Its Clinical Aspects and Treatment, London, J. and A. Churchill, 1912.

we have made use of a special lumbar puncture needle with a one way pet-cock and stilet. This is connected by a short piece of rubber pressure tube with a Tiemann manometer tube. Accuracy for this apparatus is not claimed, but so far as our own work is concerned our results from day to day have been made on a comparable basis. Blood pressure was taken by the Faught aneroid instrument.

In the actual making of the puncture and reading of the blood pressure every precaution has been utilized to avoid the commonly known sources of error and in each case the observations have been made under as nearly similar circumstances as possible. Blood pressure has always been taken with the patient recumbent on his back and after having gotten him as quiet as could be, minimizing struggling and resistance. Lumbar puncture has always been made with the patient recumbent on his left side. The blood pressure, both systolic and diastolic, was taken before and after puncture and, wherever possible, at the time of the patient's discharge. With the spinal fluid the amount withdrawn and the pressure were observed. The Nonne-Apelt and Nuguchi tests were made. Tests for alcohol in the spinal fluid were done in all cases by the iodoform test of Lieben.

In all, our work so far has included a study of 84 admissions to the psychopathic and alcoholic wards of the City Hospital. In some instances an individual has been admitted more than once and we have as a result of this 76 patients. These we have divided into two groups. One, including 34 cases, 30 of delirium tremens, 3 of chronic alcoholism and 1 of alcoholic meningitis, in which the only treatment given was a lumbar puncture. The second group includes 42 patients with 50 admissions for delirium tremens. These were not selected cases but the ordinary alcoholic as admitted to the City Hospital. The treatment given in all of the cases was substantially as follows: by mouth 60 c.c. of a magnesium sulphate solution, 3 or 4 drams of paraldehyd and 3 or 4 drams of a bromid mixture. This as a rule was repeated once in twelve hours. Tincture of digitalis (20 mm.) was given if the pulse was rapid and in a few cases strychnin ( $\frac{1}{30}$  gr.) was given every four hours. Of these 42 cases, 4 died. The average duration of their stay in the hospital was three days. In almost every instance these patients were not well, still being quite nervous and shaky at the time of their discharge, and in none of this group were there any medical or surgical complications which necessitated a prolongation of their hospital residence.

It is the first group which we wish particularly to study. Regarding the blood pressure

we find before the puncture an average systolic pressure of 149, with a maximum of 170 and a minimum of 130; an average diastolic pressure average of 69, with a maximum of 75 and a minimum of 65; pulse rate averaged 93, maximum 116, minimum 84. After the puncture we find a lower average systolic pressure and pulse pressure with a decrease in the pulse rate, but with an unchanged diastolic pressure. Observation at the time of discharge shows a still further but slight decrease, but still no change in the diastolic pressure. This finding regarding the blood pressure and pulse is similar to that which has been found by other observers, both in clinical and experimental work.

We have withdrawn on an average of 28 c.c. of spinal fluid, with a maximum of 50 and a minimum of 10. The average pressure has been 109 (water), with a maximum of 220 and a minimum of 65. Nonne-Apelt and Nuguchi tests were positive in 29 out of the 34 cases. The iodoform test revealed the presence of alcohol with certainty in 30 cases, questionably present in 3 and absent in 1. The average hospital residence in this group was 3 days. It should be noted, however, that we have included here several cases complicated by medical conditions, which later have necessitated the patient's remaining in the hospital for this condition for one to two weeks or more. If these complicated cases were not considered, the average duration in the hospital would be two days. And, moreover, these patients were in much better condition, virtually recovered, on their discharge, not being nervous and shaky as were those of Group 2, previously mentioned, who left the hospital before fully recovered. In this group there were no deaths, although several were in a very serious condition at the time of their admission.

In several instances where the patient had been admitted more than once he received treatment by both methods on the different admissions, and in every one of these instances the patient was recovered and left the hospital after the lumbar treatment a day or more earlier than he did when treated by the other method. It is worthy of note that the lay opinion of the attendants in charge of the alcoholic ward is that the patients after lumbar puncture clear up more rapidly and require less nursing care and attention than they do following other methods of treatment as formerly given.

In conclusion, we believe that lumbar puncture offers a valuable aid in the treatment of acute alcoholism and delirium tremens and that our results so far, though incomplete, justify further investigation along these lines.

Humboldt Building.



# PRESERVATION OF ARM FUNCTION AFTER OPERATIONS FOR CAR- CINOMA OF THE BREAST\*

WM. T. COUGHLIN, M.D.  
ST. LOUIS

At the present time no operation for cancer of the breast is complete without removing at the same time, or at the earliest possible moment thereafter, the axillary lymph glands and also the afferent channels connecting them with the diseased organ. In addition, all of the outlying lobules of breast tissue with the adjacent lymph spaces must be removed if one is to run no risk of leaving behind removable cancer cells. Those best acquainted with the habits of carcinoma of the breast and most familiar with the anatomical distribution of its lymphatic system go a step farther and remove the glands in the lower part of the neck, as well as the fasciae over the anterior surface of the corresponding quarter of the body.

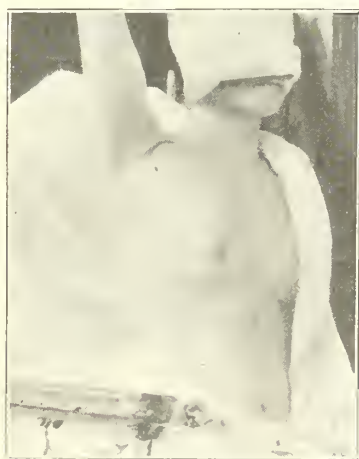


Fig. 1.—The lines of incisions as now used.

The studies of Volkmann, Stiles, Heidenhain, and later those of Handley, convince us as to the need for the removal of the entire pectoral fascia. Owing to the fact that the pectoral fascia sends processes or partitions from its deep surface in between the fasciculi of the underlying muscle, its total removal and with it the perifascial lymph spaces is quite impractical without at the same time removing the pectoral muscles. Also, in order to completely remove the glands in the axilla it is necessary to cut the muscles and turn them back. For these reasons rather than because the cancer spreads through the muscle itself most surgeons now remove both pectorals.

\*Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

In the minds of many physicians, as well as in those of the laity, there exists a pretty firm conviction that an operation for cancer of the breast means always greatly impaired function in the corresponding arm. This opinion generally has good foundation, being derived from actual experience. For it is altogether too often that one sees a badly disabled arm after removal of the breast.



Fig. 2.—Patient is early put through exercises. Note scar backward around root of arm. No axilla, no "fold." Note area to be grafted.



Fig. 3.—Case in which abdomen was first opened, suspected metastases, none found; 2 years well.

This is a dreadful bugbear in the minds of some, and through fear of a disabled arm many patients refrain from consulting a surgeon until the favorable moment has passed. The present purpose of the writer is to help to prove that there is no need for impairment of function in the arm after operation for cancer of the breast.

even when the most radical operation is practised.

The causes of disability when such exists are: (1) An inability to abduct the elbow far enough from the side so as to give the forearm free action and good leverage, essential for the most necessary movements of the forearm; (2) a stiffness of the shoulder, which renders motion painful, due either to long immobilization of the shoulder joint with the arm at the side, or to

when healing has taken place a bridge of tight skin or a scar passes from chest wall to upper end of arm. (2) From having the arm dressed too close to the chest wall during healing, so that the raw surface on what was the outer wall of the axilla heals to the raw surface on what was the inner side so that with every attempt at abduction the nerves are pulled on in their attempt to follow the outer wall in its movements as they always should.



Fig. 4.—B-2. Note angle of scapula, paralyzed serratus magnus.



Fig. 6.—D-1. No "fold" from arm to chest. Arrow points to scar at root of arm.



Fig. 5.—C-2. Note size of arm, no massage.



Fig. 7.—D-2. Perfect inward rotation of shoulder joint.

suppuration, or both; (3) an edema of the arm and forearm which renders the limb so bulky and so heavy that attempts to use it are quite fatiguing.

In order to properly combat these factors in the causation of disability, we must know on what they depend.

The inability to abduct the arm arises: (1) From an improperly planned incision, so that

The incisions should be so planned that the scar never runs across the vessels and nerves at any distance below the clavicle. This will mean that the axilla must be entirely obliterated. That used in the illustrations is a modification of Jackson's incision, the lower flap being freed obliquely downward and outward at its outer end around the root of the arm and the point of the so-formed flap being drawn right up to



the clavicle between the vessels and the chest wall. If this is done, the outer wall of the axilla can never heal to the inner, no matter how the arm is abducted during healing.

The stiffness of the shoulder is due to a false ankylosis. This ankylosis is due to a shortening of the latissimus dorsi and teres muscles and to changes in the capsule of the joint when the arm is dressed at the side and kept immobilized during healing. If the case remains clean, not so much harm is done. But even two weeks, in an elderly patient, may be enough to excite capsular shortening. There is a certain amount of infiltration into the muscles named and into the joint capsule as a result of the recent trauma in the vicinity. This leads to formation of new connective tissue in these structures and they become so fixed in their shortened state that attempts at abduction cause pain. If suppuration occurs, of course, the above

sepsis, for as it is with blood vessels so is it with lymph vessels. Collateral circulation is more difficult to establish through or around an inflamed or swollen area. Obliteration of all dead space in the axilla with immobilization abduction will go far to prevent sepsis, as you can reason out.

In conclusion, then, with proper attention: (1) to mode of operation, obliterating the axilla

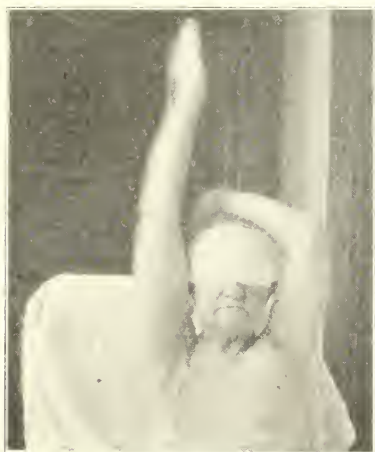


Fig. 8.—E-1. Incision a little too far in on clavicle. Note slight fold. A great deal of trouble on this account.

changes in the structures are made worse. The remedy is prophylactic. Dress with the arm in abduction.

The edema is mainly due to the fact that the axillary lymph channels have been removed. In some it is greater than in others. It continues to increase until collateral pathways have opened sufficiently to permit the lymph to return as fast as it is produced in the limb. If a simple, serous edema exist for any length of time anywhere, the connective tissue of the part overgrows and what is called chronic or solid edema takes its place. If solid edema occurs before the collateral lymph paths have been established, there is no known cure for it.

To prevent the edema, elevate the part from the beginning and employ massage in order to hasten the reestablishment of lymph circulation and forestall dilatation of the lymph spaces below with development of solid edema. Prevent



Fig. 9.—E-2. Which breast has been removed?



Fig. 10.—F-1. Complete on left. Muscles remain on right. The left is a much better arm.

entirely, and prevention of sepsis; (2) to mode of dressing the limb, in elevation and abduction from the first, and (3) to mode of after treatment, massage and passive motion from the first and early active motion; the function of the limb ought to be almost, if not quite as good as before operation, and thus this, at best dreadful, and mutilating, but withal often life-saving operation, will be shorn of its greatest terror.

Metropolitan Building.

## DISCUSSION

DR. CARYL POTTER, St. Joseph: I am glad to hear the essayist advocate the preservation of the arm function after complete operations for breast cancer; but I do not think we should lose sight of the fact that we should sacrifice that function if its preservation in any way makes possible the recurrence of growth. Too much attention is being paid to the preservation of skin flaps and the complete closure of the surface left by the removal of the mammary gland in the effort to have the skin closure complete. More than anything else we fear the skin metastases following operation. In fact, you may do a complete operation and then attempt to save enough skin for approximation and your glands in the axilla will stay perfectly clear after a clean axillary dissection. Then you will be disappointed to see a recurrence in the skin. If a person is well enough informed to know that function of the arm may be lost after breast operations she is also well enough informed to know that cancer means death. In comparing cancer, meaning death, to the loss of arm function, most persons would desire the latter if to retain that function meant possibility of recurrence. I am speaking only of cases where preservation of the function of the arm means chance of recurrence of the carcinoma. There is no particular reason why the skin should entirely cover the denuded surface. In fact, in advanced carcinoma, where the metastases have gone to the axilla, the field of operation is best exposed post-operative to massive doses of X-ray through the Coolidge tube. That is the rule we are making with our cases. If the case shows any gland involvement no matter how small, we are advising this course. We think they do better with X-ray treatment if the area is not entirely covered over with skin. We have seen two cases in which we attempted to close the skin and there were skin metastases later on. Halsted still maintains that if you are not going to sacrifice the ultimate result of your operation do not think of the skin, do not think of function, think of nothing but getting rid of the carcinoma.

DR. ST. ELMO SANDERS, Kansas City: I was particularly struck with the radical work that the essayist has been doing in these cases. When he first began to speak of conserving the function I feared that he was only inviting trouble; but if I have rightly interpreted his description of the operation it is remarkable for its extremely radical nature and I think he is greatly to be congratulated on the fact that he has evolved a procedure for bringing forward a skin flap to preserve the function while allowing for drainage after a complete operation.

Murphy, of Chicago, originated a method of using the stump of the pectoralis major jammed down into the axilla. In that way he supplied a portion of the lymphatics so that lymphatic anastomosis took place much quicker and obviated to a great extent the swelling of the arm. So it occurs to me that if a small part of the pectoralis major were taken up and jammed into the axilla behind with the doctor's posterior flap brought forward and well up, you would have what would be an ideal operation for carcinoma of the breast, and from the Doctor's description I cannot see how we will sacrifice any thoroughness in so doing.

DR. FRANCIS REDER, St. Louis: The pictures are quite convincing to me that these muscles are practically of little use to a woman when it comes to dealing with a carcinoma of the breast. However, I have not been such a strong advocate of the complete sacrifice of these muscles, for the simple reason that so extensive dissection is often followed by a lymphedema of which Dr. Sanders has just spoken. By following out a technic that Dr. J. B. Murphy devised, my patients have been free from any such consequences. My greatest difficulty was, and Dr. Potter

has stated it in his remarks, a recurrence in the scar. That, however, was due to the fact that I was too limited in my skin incision.

As far as the functional action of the arm is concerned, and the paper centers itself principally on this particular item, the pectoralis major is a muscle of adduction, flexion and inward rotation, the clavicular portion drawing the arm a little more directly forward. The pectoralis minor has very little to do with the arm function except in connection with the tendon of the coraco brachialis when it acts slightly as a flexor and an adductor. Its principal function is to draw the scapula downward and forward. The principal muscle in arm motion is the deltoid. This muscle however cannot exercise its function unless it has the assistance of the serratus magnus. As you all know the serratus magnus has no attachment to the humerus; it is a broad and irregular shaped muscle having one of its principal attachments to the vertebral border of the scapula. If the serratus magnus is paralyzed, through an accident to the posterior thoracic nerve, the deltoid muscle will not be able to elevate the arm simply because the fulcrum at the glenoid region of the scapula, which is controlled by the action of the serratus magnus, is lost. Other muscles that influence the motion of the arm are the supraspinatus; with its attachment to the greater tuberosity it assists the deltoid in abduction. There is the infraspinatus, the chief external rotator of the humerus; it is attached to the greater tuberosity and adducts the elevated arm. It is the muscle that carries your hand from left to right in writing. The teres minor, in reality a part of the infraspinatus, is a rotator outward and an adductor. The subscapularis, attached to the lesser tuberosity, is the chief internal rotator and an adductor. Another muscle is the teres major, which assists the latissimus dorsi in carrying the arm backward. It is a strong adductor and can act as an internal rotator. It can therefore be readily seen that the movements of the arm as shown on the screen can be executed without the pectoralis major or the pectoralis minor.

In one of the pictures there was shown a projection at the lower angle of the scapula. The doctor gave us the explanation for this projection. It was caused by an injury to the posterior thoracic nerve. A portion of the serratus magnus is attached to the inferior angle of the scapula and when an injury to the nerves causes paralysis we have as a result such a projection as was shown in the picture; it is called scapula alata. So it is well to exercise the greatest care in these operations that important nerves may not be injured.

I must say that I have never seen a cancerous condition in the pectoral muscles themselves. With a thorough dissection of the fascia, and the lymphatic bearing area (no lymphatics running through the muscle tissue) I feel reasonably safe in leaving some of the pectoral muscles in some cases.

I wish to take issue with the doctor in reference to cleaning out the axillary space without severing these muscles. I have been able to make a thorough and satisfactory dissection of the whole axilla without severing the pectoral muscles. It did not seem very difficult.

DR. WILLIAM KERWIN, St. Louis: A few of us present this afternoon have had the pleasure of seeing the majority of these cases presented before the St. Louis Medical Society. The time that had passed since operation ranged all the way up to seven years, which speaks for the essayist not having sacrificed the patient's welfare to preserve a good arm function, as was suggested by the doctor opening the discussion on this paper.

DR. WILLIAM T. COUGHLIN, St. Louis, closing: With regard to recurrence and preservation of function, there has been but a single one of these cases that has shown any recurrence. You have seen on the screen



nine different patients, not counting the one who was operated on for chronic, simple mastitis—her picture was included here simply to show you that the patient is worse off as regards function when you do not take the muscle out than when you do. These operations range from 1909 to the present time and not a single one has shown any sign of recurrence in the skin. One of these, the grandmother that I showed you, did develop a recurrence high up in the axilla notwithstanding the fact that I thought I cleaned everything perfectly well and had everything open to the light of day. At the second operation it was necessary to remove a portion of her axillary vein. The neck is now cleaned out in all. I think I showed you at the beginning a very horrible picture, just to impress you with the fact that I do not care much about preservation of the skin itself. The operation is a horribly mutilating thing. I enjoy the reputation of being absolutely the most heartless operator in St. Louis, when it comes to removal of carcinoma of the breast, and I tell you that when I undertake an operation for carcinoma of the breast I feel that I have a fight on my hands and I go just as far as I can. They cannot all stand total removal at one time, but they can in two operations. The neck is often done the day we do the skin graft.

Discussion of the technique of the operation would be too big a subject for this time. In regard to the axillary flap, I was led to do that because when you have the incision just going out and upward toward the apex of the axilla and attempt to draw up the skin from below you have "dead space" and you must drain there, and every time there is a movement of that arm while the drain is in situ air is sucked in and where the air is sucked in even through the dressings, bacteria may get in; I have found suppuration is more likely to ensue if you have a dead space there, and I have tried to obliterate all dead space by that axillary flap. It does very well if one does not get the incision too far out on the shoulder.

This paralysis of the serratus, shown in one case, was done with malice aforethought. I knew just what I was doing when I removed that portion of the muscle on which the nerve lay because it was all infiltrated in carcinoma. That woman was treated two years ago with paste and had a recurrence inside of a few months. The disease had spread widely in the muscles.

As to removal of the fascia, the doctor has very well said that it is along the fascia that the trouble lies. The trouble spreads in the perifascial spaces. Any one who has gone over this region in dissection knows that the intrafascicular septa dip down from the under-surface of the fascia, covering the pectoralis major and render its total removal a question of a long time, and time is quite an item when it comes to these operations, as they will take you about two hours to do, even when all is favorable.

#### A PLEA FOR LESS OPERATIVE INTERFERENCE IN TREATMENT OF ORGANIC STRICTURE OF THE URETHRA\*

LEO BARTELS, M.D.  
ST. LOUIS

To bring before this Association a subject so familiar may seem to many to be the work of supererogation. However, the rapidly changing point of view of modern medicine is nowhere more strikingly illustrated than by the complete absence of interest in stricture of the urethra.

We were taught to consider only one method of treatment applicable to the great majority of cases and were not sure when to pursue a different course, although conditions were completely dissimilar. Also the complications of stricture were given slight consideration and in our zeal to enlarge the caliber of the urethra our patient became septic due to too frequent or too severe instrumentation.

To cover the entire field of stricture of the urethra would, even if possible, take much more time than is at my disposal. Hence, I will limit myself to organic stricture of the urethra.

Organic or acquired stricture is a narrowing of the canal due to submucous inflammatory exudation with the formation of fibrous tissue, and is most frequently the result of gonorrhea in the male, but may be due to traumatic violence, mechanical or chemical.

*Etiology of Organic Stricture.*—Etiology of organic stricture is not a part of my paper, but as it often has a considerable bearing on the treatment, I will touch on the few important causative factors. Gonorrhea is the cause of the greatest number of strictures. Traumatic violence, either mechanical or chemical, may be followed by the formation of stricture. This may occur as a direct blow or fall on the perineum or as an internal trauma by unskillful instrumentation or by injections of strong caustic solutions as carbolic acid, mercury bichlorid, or strong silver nitrate solution.

Stricture occurring from gonorrhea is mainly due to the long-continued inflammatory process. Therefore we find stricture present more often in gonorrhea cases of long standing than in those of short duration, even though the inflammatory process is very intense. Formation is rather slow, usually not occurring before two years after the gonorrhea infection. In traumatic stricture the reverse condition is true. The more severe the injury the more rapid and severe is the stricture. It also follows that traumatic strictures are much more difficult to dilate and are prone to contract more quickly than other forms of strictures. A stricture may have originated in traumatism and become intensified by infection or the reverse may be true. Organic stricture may occur in very young people, especially a traumatic stricture, the result of some injury to the urethra during childhood.

Congenital stricture, even though very tight, has no tendency to contract unless the urethra becomes inflamed, either as a result of infection or trauma. Under this condition a congenital stricture may become the seat of a true stricture.

The so-called inflammatory stricture is a constriction of the urethra caused by a soft inflammatory cellular infiltration. This may be the initial stage of a true stricture and later undergo the usual sclerotic changes. It also is often entirely absorbed.

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

*Urethral Stricture in Women.*—Women suffer from stricture of the urethra more frequently than is supposed. However, stricture in the female is rarely of the extremely tight sort which we find in the male. Possibly owing to the fact that the female urethra is very short and almost straight, it is more accessible, thereby doing away with some of the difficulty we encounter in the longer and more curved



Fig. 1.—Sacculations of the female urethra which may later lead to formation of stricture. Reed Gyn.

urethra of the male. These are the patients who make the usual rounds of doctors several times over and are benefited by irrigation of the bladder, if the physician uses a catheter of sufficient size to dilate the urethra. If large sounds or a Kollmann dilator be used, relief is surprising, but of short duration unless the patient continues to have her urethra dilated occasionally. Her relief will be short, because these strictures are very diffuse, involving the entire wall of the urethra and at times the surrounding tissue.

*Location.*—Organic strictures due to gonorrhea are most frequently located about the bulb or anterior to it and extending into the membranous urethra. The prostatic urethra is never involved. However, it must not be forgotten that a cicatricial contraction may form at the internal vesical orifice as the result of a gonorrheal inflammation. The symptoms of this condition are very similar to prostatic obstruction. Traumatic stricture may occur anywhere in the urethra, but is most commonly located in the bulbous, membranous or prostatic urethra.

*Treatment of Organic Stricture.*—Rectal palpation of the prostate should always be done before a urethral examination, so as not to overlook prostatic abscess, prostatic hypertrophy or malignant infiltration. Either of these conditions may give symptoms simulating or associated with stricture. To make any urethral examination the utmost cleanliness is necessary. The glans penis and surrounding area should be

thoroughly washed with soap and water and finally rinsed with mercury cyanid solution. Before any instruments are used it is always well to irrigate the anterior urethra with some bland, slightly antiseptic solution. I use a Valentine irrigating apparatus for this purpose and prefer to use potassium permanganate solution 1-8,000.

The next step is to procure as satisfactory local analgesia as possible. This is best accomplished by using an anterior urethral syringe as devised by Dr. G. S. Peterkin, using about half a dram of 5 per cent. alypin solution. Allowing this to remain in the anterior urethra for a short time before very gently and slowly forcing it back on the cut-off muscle by pumping air into the urethra with the same anterior urethral syringe, until the urethra becomes distended. The meatus is kept closed by holding it between the fingers until sufficient time has elapsed for analgesia. At times, after the cut-off muscle becomes anesthetized, it relaxes and a small quantity of the air reaches the bladder with the anesthetic solution. This does no harm and certainly means that you have enough anesthesia to proceed. By this method of anesthesia it is possible to reach portions of the urethra which would be impossible by using the Keyes-Ultzmann or similar syringes. The solution under

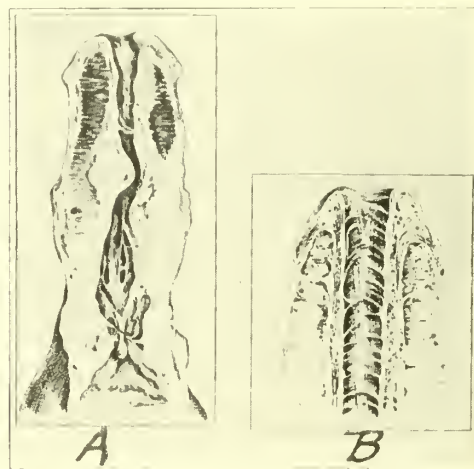


Fig. 2.—A, Tortuous stricture of urethra. B, Section of urethra showing anatomical bands. Chetwood.

slight pressure will permeate the narrowest and most irregular passageways of the urethra and make instrumentation far less painful. In very nervous patients it is advisable to use a hypodermic of pantopon, grain one-sixth to one-third. This drug has the preference over morphin in that nausea and vomiting after its use are reduced to a minimum.

The first part of the examination consists in passing a metal bulb sound, the largest that will pass the meatus. If a 26 F. fails to pass the meatus, a meatotomy is necessary and can be



painlessly done after allowing an alypin tablet to dissolve in the meatus, waiting a few minutes for analgesia. The 26 F. bulb is passed as far as the cut-off muscle. If an obstruction is found gradually smaller bulb sounds are passed until one passes. It is not advisable to use bulb sounds smaller than 15 F. If a bulb sound, size 26 F. or larger, be used the slightest swelling or infiltration along the urethra will be readily transmitted to the tactile sense. By using an



Fig. 3.—Contracture and elevation of vesical outlet. Chetwood.

ordinary steel sound a stricture of large caliber will often be overlooked. Infiltration or a sclerotic plaque of the urethra will be pushed aside and not demonstrated. This probably explains why in the older works on genito-urinary diseases it was recommended that sounds be passed on cases of chronic gonorrhea, even though symptoms of stricture were not present. If these cases are examined closely early infiltration or strictures of large caliber will often be found, and unless they are dilated the infection remains indefinitely.

Strictures of large caliber are easily treated by regular dilating with a Kollmann dilator, followed each time by an irrigation.

**Tight Urethral Stricture.**—Because a patient has a retention of urine it does not follow that he has an impassable or even an extremely tight stricture. A spasmodic stricture may cause a complete retention secondary to the irritation of a true stricture, usually located at the bulbo-membranous junction. Spasmodic strictures always occur in the membranous urethra.

The treatment of tight stricture is at times very difficult at the beginning. We must be very gentle so as not to traumatize the urethra too much by trying to force steel sounds or bougies. Time, patience and good local anesthesia are imperative. If after attempting to pass sound and bougie without getting by the stricture the detached filiforms of a LeFort sound are used in the same manner as the ordi-

nary whalebone filiform. These filiforms are made of woven silk and covered with a rather hard, but elastic gum, which permits boiling. At the one extremity they are provided with a threaded metallic tip so that it may be screwed on to the sound with a very gradually tapering tip. In this way the filiforms serve as the entering wedge for the sound. These sounds may be had in various sizes and are so made that all sounds and filiforms are interchangeable. The filiform director and sound have decided advantages over the ordinary wholebone filiforms and grooved sound. It is very difficult to pass a grooved sound over a filiform if the stricture is a tight one. I have seen a whalebone filiform kinked and broken off in the urethra by passing a grooved sound over it. I have also seen the filiform slip from its grasp and pushed completely into the urethra and bladder.

After succeeding in passing sounds the first time, it is well to let the patient rest for two to five days before using instruments again — this to depend on the amount of local or constitutional reaction, which is usually slight. It is well to irrigate the entire urethra daily during this interim under hydrostatic pressure, not with a catheter, but with a glass urethral nozzle, using a hot mildly antiseptic solution. You will be surprised to see the benefit derived by applying the same common-sense surgical principles of reducing congestion and maintaining surgical cleanliness to the traumatized urethra which you apply to open infected wounds. At the second or most certainly the third instrumentation it is rarely necessary to use the filiform director,

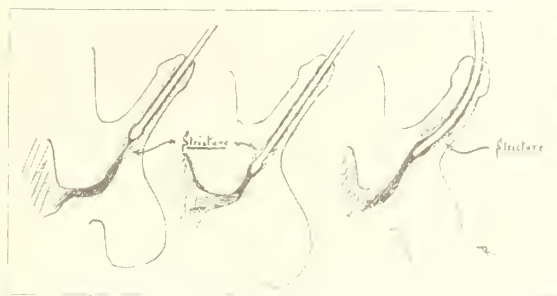


Fig. 4.—Diagram showing the fallacy of using ordinary steel sounds instead of bulb sounds to locate infiltrations of the urethra.

as by this time the operator is sufficiently familiar with the irregularities of the urethra to pass sounds or bougies.

**Practical Aids in Instrumenting the Urethra.**—If the stricture is of the deep urethra it is at times very helpful to place the finger into the rectum to aid in directing the instrument.

The injection of adrenalin just anterior and about the stricture seems to be of help in reducing the congestion and facilitating the passage of the instrument. A flexible olive-tipped or rat-tail silk webbed bougie may permeate a

stricture where ordinary sounds have failed. Owing to its flexibility it adapts itself to the individual curves of the urethra.

Another procedure of considerable help is to have the beak of your instrument gently hug the roof, then the floor, and finally either side of the urethra during its passage. Instrumentation is also facilitated by making the urethra taut by pulling the penis out rather forcibly and

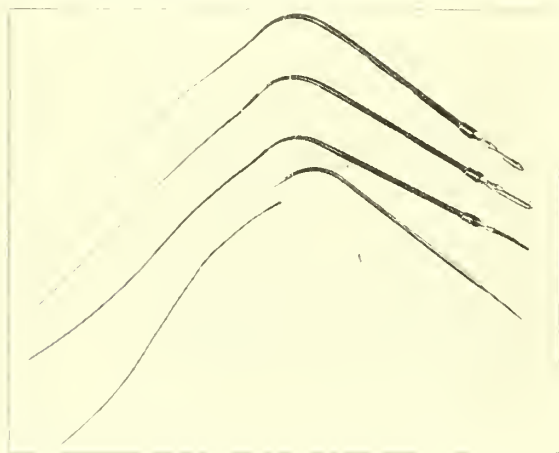


Fig. 5.—Le Fort sounds.

changing the angle of the urethra by moving the penis to one side or the other, up over the pubes, or down towards the perineum.

Thermo sounds (Wappler Electric Co.), by which extreme heat may be applied to the strictured urethra are very efficacious in softening the parts. These may be had in anterior or posterior sounds of various sizes. They have an electric heater similar to the one used in electric hair curlers. Each instrument has a provision for connecting a thermometer which is in direct contact with the heater. The current is best supplied by a No. 3 (Wappler) controller, with a 32 c. p. resistance lamp or some specially devised resistance coil. By this procedure an even and safe temperature can be maintained for a long time. The sound is inserted into the urethra and the current gradually increased according to the comfort of the patient. They usually tolerate 115° to 125° F.

At this point I want to sound a warning. Very often we see patients with very tight urethral strictures, but who are still able to pass their urine, although in a very small, fine stream. These cases may be very difficult to instrument successfully owing to the tortuous condition of the urethra. Any unusual trauma about the site of the stricture unless we succeed in passing it, will inflame the parts, often causing a complete retention. This will be far less liable to happen if we use extreme gentleness in passing the examining bulb and steel sound. And here is the greatest value of the filiform director and sound. Once we succeed in passing

one of the filiforms a small sound may be attached which will follow the course of the filiform. Since these filiforms are interchangeable, succeeding larger sounds may be passed, always using the same filiform. It is well not to dilate the urethra too much at one sitting. All instrumentation should be followed by an irrigation, using hydrostatic pressure if possible.

We often hear that it is advisable to do an external perineal urethrotomy more often on clinic patients than in private work, as it saves them time. I doubt this very much as you can usually figure at least three weeks away from work if operated on, while with gradual dilatation they may not be away from work a single day, although their treatment will extend over a longer period. There is one outstanding fact concerning this class of people. They accept operation, believing this will mean their immediate cure once and for all. Under this impression they are more than willing to give up a few weeks' time, inconvenience and additional expense. And even though advised, by their physician, of the necessity of having sounds passed at certain intervals after operation, they neglect doing it. This as a rule brings about worse conditions. Strictures recurring after external perineal urethrotomy are certainly more difficult to dilate and show more tendency to recontract than previously.

Complete retention of urine when the stricture is impermeable to any instrument passed through the urethra does not necessarily demand



Fig. 6.—Diagram showing Le Fort directing piliform attached to sound.

operation. It is possible to insert a trocar and cannula suprapubically. The one devised by Dr. W. E. Lower being preferable. The trocar and cannula are forced into the bladder at a point in the midline about half an inch above the pubes so as to avoid the plexus of veins which lie just behind the pubic bones. The trocar is then withdrawn and a No. 14 F. rubber catheter is inserted through the cannula into the bladder. The cannula is withdrawn and the bladder emptied through the catheter which is left in place.



The day following, another effort is made to pass the stricture by means of the director filiform which, owing to the relieved tension, is very likely to succeed.

After a stricture has been dilated to size 24 F. the subsequent treatment is best accomplished by a Kollmann dilator.

*External Perineal Urethrotomy.*—This operation should not be adopted as a method of choice but as an emergent necessity, as in extravasation of urine, prostatic or perineal abscess, and complete retention with urinary sepsis where the above described suprapubic drainage and subsequent passage of any instrument through the urethra was unsuccessful. A last effort should always be made to pass instruments after the patient is anesthetized for operation. In patients with retention the parts often become relaxed so as to make instrumentation successful.



Fig. 7.—Trocar and cannula for preliminary suprapubic drainage as used by Dr. W. E. Lower.

#### SUMMARY

1. Time, patience, absolute cleanliness and good local anesthesia are essential for any urethral examination.
2. Systematic examination, with bulb sounds, even though there be no difficulty in urinating.
3. A complete and proper examination of the urethra cannot be made through a meatus of smaller caliber than 26 F.
4. Meatotomy can be done without pain or inconvenience to the patient.
5. Refrain from traumatizing the urethra by frequent or too severe instrumentation.
6. By sacrificing more time and being equipped with the proper instruments, I am sure a very small percentage of these cases will require operations.
7. Honest advice to your patient. Tell him, that as far as permanent cure is concerned, the prognosis is guarded, and advise him that the stricture will usually have a tendency to recontract; therefore, he should submit to examination and treatment if necessary at specified intervals.

635 Century Building.

#### DISCUSSION

DR. JULIUS FRISCHER, Kansas City: In the past twelve months I have been in the habit of doing Wassermanns on all cases of stricture referred to me and have found a great number of them positive. I believe that strictures found with positive Wassermanns are due to lues superimposed on a gonorrhea with a mucous patch, gumma formation and cicatricial tissue changes following. This may not be true always but I have found it such in a number of instances.

I believe as the essayist does in regard to passing a filiform and threading on the LeFort sound, but some strictures are so tight that you just get your filiform through and too rapid dilatation is not good for the patient either, so I have placed an indwelling filiform for twenty-four hours and found that I was able to thread a LeFort sound on my filiform and get into the bladder.

I do not advocate the idea of a bladder trocar. I think that a suprapubic cystotomy and careful dissection under local anesthesia is always better and you are taking no chances of doing a patient harm, as you may do with the bladder trocar. It makes no difference how careful the operator may be with the bladder trocar, it is a dangerous procedure.

DR. C. E. BURFORD, St. Louis: I have not heard a paper on this subject before the Association for some time, yet it is a subject of great practical importance. We see in St. Louis at the City Hospital a good many deaths result from urethral stricture and its complications. Of course in that class of patients there has usually been a great deal of neglect.

The cause of stricture is usually periurethral inflammation. The amount of stricture which will form depends entirely on the amount of periurethral inflammation—that is, gonorrheal stricture—and preventing this will prevent a great many strictures. This is illustrated, for instance, in cases of chordee. We are pretty sure to have stricture following a chordee, and it is merely periurethral inflammation. We see that in the City Hospital because they are neglected cases and that is the point I wish to stress. If gonorrhea were properly treated in its early stages, treated actively and vigorously, instead of by the so-called "expectant plan," we would have very few strictures. In private practice we get very few strictures among people who are able to take care of themselves, who go to the doctor early and get proper treatment; but in the City Hospital where we have the neglected poor we find stricture all the time and we have more strictures to treat than anything else, so it is quite well proved that the neglected cases of gonorrhea are the cases that have stricture. If this one thing could be impressed on the general practitioners and if they would take up the early and active treatment of all cases of gonorrhea, I think we could prevent practically all cases of stricture. Of course, my cases may go to some other doctor when they get strictures, but in several years' time in special work I have had, to my knowledge very few cases of stricture in patients suffering from gonorrhea because we usually get them early and treat them actively.

DR. CLARENCE MARTIN, St. Louis: I think we may divide strictures, for practical purposes, into two classes, those which can be dilated and those which cannot be. Those which are susceptible of successful dilatation, as Dr. Henderson says, comprise probably nineteen out of twenty. The other five per cent. must come to operation. I know of no better way of cutting these strictures than with the Maisonneuve urethrotome. With that instrument, you can cut every stricture you can get a filiform through, up to 27 or 28 French. Then for the sake of safety, introduce a small drainage tube through a perineal opening and thus drain the bladder for four days.

The point, I think, that is to be impressed upon these patients is the necessity of their return for treatment from year to year. Otherwise, recontraction is inevitable.

DR. JOHN R. CAULK: Both Dr. Henderson and Dr. Burford have, to my mind, sounded the keynote in the treatment of stricture. That is prevention. Not only must great importance be attached to the treatment of the acute urethritis, but the utmost importance, in my opinion, to the treatment of the follow-up stage. We must watch out for chronic involvements. There seems to be a current opinion that when a man's discharge ceases and the urine becomes clear, he is cured. Frequently patients are let go at that stage, thereby allowing a dormant infection to gradually develop into chronicity. It is that type we hope to prevent in this day of modern urology.

Associated with the stricture in its treatment, we must also pay attention to the processes back of it; that is, the vesicle and prostatic condition. Drainage will obviate a great deal of the trouble but it will not always clear up the vesicle and prostatic infection, which is almost invariably associated with a stricture in the deep urethra.

I was very glad to hear Dr. Martin mention the cutting of stricture, because it suggested how we are getting away from the old-school cutting. There is unquestionably a certain group of strictures that must be cut, but we are proud to say that we are getting gloriously away from the palmy days of cutting for stricture whether there is a stricture present or not. A little caution must be exercised in cutting a stricture with a Maisonneuve, or any other urethrotome, if one gets beyond the external sphincter. I have made it a practice never to do an internal urethrotomy back of the external sphincter for fear of hemorrhage or for fear of urinary infiltration.

DR. LEO BARTELS, closing: As far as suprapubic cystotomy for drainage is concerned, I think if I were going to drain a case of stricture I would do an external perineal urethrotomy and be done with it.

The urethroscope is of value only in one case and that is the so-called "inflammatory" stricture where an occasional application of silver nitrate is probably of value.

I do not believe we are justified in guaranteeing any patient a cure for stricture although we do know that some strictures are cured.

So far as the Wassermann is concerned in stricture, I doubt very much if it has a bearing on the formation of stricture itself. We know that these patients while they are exposed to gonorrhea may acquire lues at the same sitting.

I admit damage may be done by passing small instruments even whalebone filiforms, but damage with one of the soft silk web filiforms is impossible. They are so soft and pliable that they could not make a false passage.

Dr. Burford mentioned chordee as probably the early warning of an impending stricture. We know from going over the records of stricture, that the large percentage of them follow gonorrhea of long standing regardless of the intensity of the disease. Chordee is usually an early manifestation of the disease and does not mean that we are to have a case of gonorrhea of long standing, therefore, I doubt if it signifies an impending stricture.

I believe that if you get a filiform through the stricture the great majority of them can be dilated, and even though you do not get the stricture up to the large size sound at once the relief is practically instantaneous unless there is some associated condition, as enlarged prostate, stone in the bladder, or infected kidneys which probably keep up the infection.

## PROTEIN INDIGESTION IN INFANTS

JOHN ZAHORSKY, M.D.  
ST. LOUIS

### I

The reader of pediatric literature in the last ten years is struck by the remarkable change in the attitude of the profession toward the digestibility of protein. Only one authoritative source need be given to illustrate this point.

"It is the difference in the digestibility of the proteids that cause most of the trouble in the substitute of cow's milk for woman's milk." (Holt, third edition, p. 126).

"It may be said that there is at present no proof that milk protein even in considerable excess is dangerous to the welfare of the infant" (Holt, seventh edition, p. 130).

On what experiments or clinical observations is this change in opinion based?

The study of Czerny and Keller probably did more than anything else to upset the old ideas concerning the difficulty of protein digestion. Finally the general use of buttermilk and *ewweiss milch* gave the practitioners a frequent demonstration that the proteins of milk need not be feared when given in this way.

What becomes of our old experience that indigestion in the baby frequently can be ameliorated by reducing the content of protein? Did not our best American pediatricists find that a variety of dyspeptic symptoms in the baby can be relieved by diminishing the protein?

Did we not succeed in rearing fine babies by the practice of giving a good percentage of sugar and fat and very little protein at first?

These clinical observations should stand and it is the duty of modern investigation to harmonize them with the newer theories. Certainly the theory that diarrhea is caused by an exhaustion of the assimilative powers and a resulting intolerance to sugar does not explain these older observations.

A few years ago Dr. W. A. Smith made some tests for me in which we observed that the products of fermentation depended in a great measure on the quantity of milk which was in the mixture. At the time we were studying the fermentability of the sugars. A year later appeared the careful study of Bluhdorn in which he proved conclusively that the fermentation of sugar depends not on the quantity of this carbohydrate but on the concentration of the protein substance in solution.

Dr. Coffin and I have repeated some of these tests and it was easy to get complete confirmation of his results. Only two experiments will be given although several more were made.

Experiment 1.—Four saccharometers were filled with diluted milk and milk sugar added so that the solution contained 7 per cent. sugar.

The tubes were incubated for twenty-four hours.



Tube 1.—Water with 7 per cent. milk sugar; no gas; acidity, 0.1.

Tube 2.—One part milk, seven parts water, milk sugar 7 per cent.; a few gas bubbles; acidity, 0.7.

Tube 3.—One part milk, one part water, milk sugar 7 per cent.; gas bubbles; acidity, 2.4.

Tube 4.—Undiluted milk, milk sugar 7 per cent.; numerous gas bubbles; acidity, 4.8.

Experiment 2.—Experiment 1 was repeated, the same dilutions being used; each tube, however, was inoculated with 1 drop of stool from an infant suffering from diarrhea.

Tube 1.—Water with 7 per cent. milk sugar; gas 0.1 mls; acidity, 0.1.

Tube 2.—One-eighth milk, 7 per cent. milk sugar; gas 0.3 mls, acidity, 2.8.

Tube 3.—One-half milk, 7 per cent. milk sugar; gas 0.6 mls; acidity, 7.3.

Tube 4.—Whole milk, 7 per cent. milk sugar; gas 2.4 mls; acidity, 10.

The acidity is expressed by the number of mls used in neutralizing ten mls of the fluid, phenolphthalein being used as the indicator.

The greater acidity in the second test was caused by the inoculation used. The bacterial activity depends in the greatest measure on the amount of protein present. There is practically no fermentation of sugar in the absence of protein.

The practical conclusion is that whenever protein undigested or partially digested reaches the lower end of the ileum and large intestine in the presence of sugar, and is inoculated there by the myriads of bacteria, rapid fermentation takes place. If the sugar is all absorbed or if the protein is all absorbed before the rich bacterial flora of the lower intestine is reached little fermentation results.

As a great excess of sugar is not often administered in practice, the conclusion is inevitable that excessive fermentation (and putrefaction) is nearly always due to protein indigestion and not sugar indigestion.

Now, this theory explains the clinical facts better than any other.

Excessive fermentation occurs in the newly born when the protein of human milk is the highest, so called acid dyspepsia of the newly born.

It is found more often when raw milk is used, because the hard casein masses formed by raw milk is carried farther down.

It explains why lowering the protein percentage improves the dyspeptic symptoms, also why peptonization is serviceable in practice.

It explains why the addition of a small quantity of milk to condensed milk or malted milk mixture often produces diarrhea.

It explains the laxative effect of whey, without resorting to the discredited salt theory.

It gives a physiologic reason for the coagulation of casein, since the protein is thereby re-

tained in the stomach until the sugar is absorbed.

It explains why feeding of cow's milk to infants who have had gastro-enterostomy done for pyloric stenosis nearly always results in diarrhea.

It tells why protein with carbohydrates is dangerous in diarrhea, since the increased peristalsis induced by an inflamed or irritated intestine rapidly pours the protein in the infected parts of the alimentary canal.

It explains why a purgative given soon after a meal increases the fermentative processes and sometimes starts a diarrhea.

Even Finkelstein had an obscure vision of this when he wrote of the correlation of food elements. The correlation means nothing more than that protein and sugar must not reach the infected part of the alimentary canal at the same time.

But what about *eiweiss milch*?

This is casein-buttermilk and lactate of casein and albumin do not favor fermentation, as is easily enough shown in the test tube. Casein added to sweet milk has no power to check intestinal fermentation. Sugar may be added to casein-buttermilk up to 4 or 5 per cent. without increasing intestinal decomposition. The acid casein particles do not favor the growth of bacteria.

#### CONCLUSION

Intestinal indigestion with acid or putrefactive stools in practice usually indicates protein indigestion, which may be relieved by lowering the percentage of either protein or sugar.

4435 West Pine

#### TWO CASES OF IDIOPATHIC TETANUS DUE TO DECAYED TEETH

E. W. SAUNDERS, M.D.

ST. LOUIS

1. A boy 10 years of age ate frozen grapes lying on the ground beneath the vines and covered with dirt, which was not washed off. Ten days later the symptoms of lockjaw developed and increased in severity in spite of treatment.

Two decayed teeth were extracted under anesthesia, and the symptoms shortly began to improve, going on to complete recovery.

2. A farmer was brought into the hospital suffering from lockjaw, which did not improve under treatment until a carious tooth which had produced an alveolar abscess was extracted. The resulting improvement went on to complete recovery.

Had not the teeth been suspected of being the foci of infection, these two cases would in all probability have died and been called idiopathic tetanus. The totally unproved theory that the germs may be swallowed and absorbed from the stomach or intestines has never been satisfactory and in view of the success achieved in the two cases reported it is incumbent upon the physician to search for carious teeth and to extract them in every case of tetanus of unknown origin.

Lister Building.

# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

NOVEMBER, 1917

### EDITORIALS

#### MEETING OF STATE COMMITTEES, MEDICAL SECTION AND GEN- ERAL MEDICAL BOARD

A notable gathering of eminent physicians and officials of the war departments of the United States, Great Britain and France occurred in Chicago on Sunday, October 21, when the medical section of the national council of defense and the members of the medical sections of the state committees met in Chicago to discuss the problem of maintaining the health of the fighting forces of the allied nations. An open meeting was held in Orchestra Hall on Monday night, October 22, when addresses were made by Josephus Daniels, secretary of the Navy; Surgeon-General W. C. Gorgas, of the United States Army; Surgeon-General W. C. Braisted, United States Navy; Surgeon-General Rupert Blue, United States Public Health Service; Sir Berkeley Moynihan, personal representative of Sir Alfred Keough, Surgeon-General of the British Armies; Col. T. H. Goodwin, representative of the director general of the British Medical Service; Col. C. U. Derle, representative of the medical department of the French Army, and Major Geo. W. Crile, surgeon in the United States Army.

The occasion was an inspiring one and the audience was roused to a high degree of realization of the intense earnestness of our government in the prosecution of this war. The source of the rumors of severe casualties among army surgeons in the allies forces, so persistently circulated in this country recently, was attributed to the German propaganda, by Sir Berkeley Moynihan, who said it was part of the Prussian method to discourage American physicians from enlisting in the service. Bombing hospitals was merely a phase of German frightfulness intended to make the American physician, through fear of his life, forget his loyalty to his country and his duty to humanity. In thus "nailing another German lie" Sir Berkeley said that only 250 doctors had lost their lives on all the British fronts since the war began.

Surgeon-General Gorgas also made an interesting revelation when he stated that he had

only 452 medical officers in our entire army just before the declaration of war last March. Today he has almost 20,000 physicians under commission and nearly 15,000 in active service — convincing proof that the great body of medical men in this country are not slackers, and disposes finally of that other rumor current so recently that the doctors of America were not responding to the call of their country in sufficient numbers to care for the needs of the army. General Gorgas directed attention to another phase of the medical service that will be required from our medical officers when he reminded the people that this country is far removed from the fighting front and that it would be impossible therefore to utilize the hospital facilities in this country to any great extent in caring for the wounded men of our army. Those who are permanently disabled will of course be sent back to the United States, but those who can be restored to firing line within six months — and they constitute the vast majority of the wounded soldiers — must be cared for in the hospitals in France. For this reason he said it will be necessary for the hospitals in this country to strip their staffs to the minimum and send large numbers of their forces to Europe.

Colonel McLain of the general medical board presided at the meeting of the medical sections of the state committees where reports from a number of states were read and many vexing questions elucidated. This was an interesting session characterized by a very frank discussion of the work of the state committees, which undoubtedly will result in a more intelligent and efficient execution of their labors. One question asked by the editor of a state association journal concerning the entire absence of authoritative information from the general medical board to the medical profession through the state association journals, was answered by the assurance that a plan was almost perfected and would soon be put in operation to utilize these sources of publicity.

The members of the Missouri State Committee of National Defense, medical section, present at the meeting are: H. G. Mudd, R. E. Schlueter, W. H. Luedde, W. J. Frick, Jabez N. Jackson, J. D. Griffith, Willard Bartlett, F. W. Bailey, Geo. W. Cale, John Young Brown, E. J. Goodwin, Daniel Morton, W. W. Duke.

#### MAJOR BLAIR HONORED

Among the many new activities in medicine which have developed in consequence of the war, one of peculiar interest to the profession of Missouri is the organization by Major Vilray P. Blair of St. Louis, of the Military Hospital Section of Oral and Plastic Surgery and the



recent establishment in St. Louis of the first officers' school for training in this line. As everyone knows this special field calls for skill, inventiveness and anatomical knowledge in high degree. These attributes and attainments were happily born in and laboriously acquired by Major Blair and formed the foundation for his study and treatment of defects and wounds of the face.

Major Blair was graduated from the Medical Department of Washington University in 1893 and for years afterward studied and taught practical anatomy in that institution. His interest in oral surgery began about 1897. It is probable that, as so often happens, a particular case (in this instance mandibular prognathism) determined his career. A number of contributions to jaw surgery followed, giving evidence of grasp of the problems and ingenuity in solving them. In 1912 "Surgery and Diseases of the Mouth and Jaws" appeared, showing wide knowledge of facial defects and their treatment, of which a large part of the special technic was original with the author. It is the only book on the subject and is now in its third edition. At the beginning of the war Major Blair, as a member of the Medical Reserve Corps, was sent to Fort Oglethorpe, and when, after a short period of service, the several special units of the military hospital staffs were determined, he was called to the office of the Surgeon-General of the Army to direct the organization of the Section of Oral and Plastic Surgery. In times of peace oral surgery is but one of many specialties of about equal significance, but in modern warfare the importance of the care of face injuries looms up in huge proportions. The Surgeon-General's choice of leadership in this service is a splendid compliment to Major Blair, but one well deserved, and it gives the occasion for profession and friends to extend to the director congratulations and hearty wishes for further success in his chosen field.

---

#### THE SOCIAL HYGIENE MOVEMENT IN MISSOURI; WARM SUPPORT BY THE KANSAS CITY PROFESSION

Many of our readers are already acquainted with the aims and activities of the Missouri State Social Hygiene Society, in affiliation with the national body of the same name, which held its annual meeting in St. Louis last fall, which meeting I was privileged to attend as a delegate from the St. Louis Medical Society. Briefly stated, these aims are to strive for a higher standard of morality in sex matters, working to that end in harmony with all

agencies, state, municipal, social, religious or other, directed to the same purpose; to combat the social evil, and to reduce the terrible prevalence of venereal disease. These aims it hopes to attain by the dissemination of correct information among adolescent boys and young men, and by securing proper laws touching on the social question. The latter point again demands the education of the public as a whole as to what these laws should provide, and what, specifically and concretely, are the best methods for dealing with the problem of prostitution. That the subject is a thorny one and demands as much discretion as devotion is readily understood. It cannot be preached from the house-tops, like the tuberculosis crusade, and yet it exceeds that problem in importance. Its mere mention is deemed an offense by some good people, and yet the evils at which our efforts are aimed menace the pure as well as the profligate.

A vast deal of good has already been accomplished by the movement in many states of the Union. An endeavor which from the first was prompted by the purest patriotism, now appeals to this lofty sentiment with a new and peculiar force. Our new armies face in the venereal peril a greater danger than that of German shot and shell. How great that danger may be is exemplified by the statement of a medical officer with the British forces in France, that the British army had had more men incapacitated during the first eighteen months of the war by venereal disease than by all the casualties of combat. And note, that these plagues were contracted, not at the front, but in the home mobilization and concentration camps. To guard our boys against a similar fate is not only a moral obligation, but a dire necessity if we are to win the war.

Encouraged by the results of its activities at Jefferson Barracks and Maxwellton, the executive committee, Missouri State Social Hygiene Society, felt that similar activities throughout the state should be stimulated and coordinated, and with that end in view, requested me to visit Kansas City with the idea of organizing a local committee among our membership there and to do what I could to arouse interest in the cause. Accordingly, I spent two pleasant and profitable days in our sister metropolis, August 16 and 17. I talked at length with a number of our confrères—Dr. Herman E. Pearse, Dr. Coon, the recently installed health officer, Drs. Jabez N. Jackson, William Frick, W. J. Frick, R. L. Sutton, Franklin E. Murphy, W. W. Duke, Dora Green-Wilson and others, besides a number of prominent clergymen and laymen. All were most kind and ready to do all in their power to second my efforts. I feel under especial obligations to Dr. Pearse who sacrificed much of his valuable time and arranged to have

me make a talk at the City Club. Cards were mailed to the members and notices published in the *Times* and *Post*. After brief remarks by Drs. Pearse, Coon and Sutton, I stated the object of the movement, its methods and what it had accomplished in many parts of the country. The audience of about 125 manifested throughout the greatest attention and interest.

What I learned of local activities led me to modify my plan of action. The Kansas City Society for the Suppression of Organized Vice, composed of a number of the best citizens, has since 1913 conducted a vigorous and on the whole successful campaign. It seemed that with a good working organization, covering our aims at least in large part, already in existence, to create a local branch of our organization would be an unnecessary duplication of effort, and that it would be better to work for a later affiliation of the Kansas City body with our state society. In my talk to the City Club I, therefore, limited myself to an exposition of the aims of the Social Hygiene Society, the need for its existence, its methods and what, specifically, it hopes to effect, and urged those present to rally to the support of the Kansas City society. I look hopefully to an early coordination of St. Louis and Kansas City forces in this field.

I found a little time to see something of the work being done by our Kansas City brethren in their various fields, and must say that I was impressed by the thoroughness and efficiency of method employed by many of them.—Joseph Grindon.

### WHEN ABRAHAM LINCOLN SWAPPED HORSES

In these days of war's disturbing influence on the home life and practice of the physician, it may give healthful pause to our mental unrest if we glance into the past and read of the trials of the pioneer physicians in this section of the country; especially interesting will it be to read at the same time of the part that Abraham Lincoln played in saving a country doctor from the clutches of a designing land shark. We find the story in the interesting and delightful description of the life of the Great Emancipator from the pen of Henry B. Rankin,\* and from it we excerpt the following experiences of Dr. Charles Chandler:

Another incident in the life of Lincoln at Salem deserves mention as showing his practical way of meeting the emergency of a stranger in sore need of immediate assistance. So far as I am aware, it was the only time Lincoln ever "swapped horses."

In 1830, Dr. Charles Chandler, with his family arrived in what is now Cass County. He became, from

the time of his arrival in that vicinity, a valuable professional addition to the settlement, and his practice extended over a wide area of the country bordering the Sangamon and Illinois river bottoms and prairie lands adjacent. Like most early settlers of his time, his finances were limited, and what money he brought with him was expended first for labor to build his cabin; for the purchase of two horses and a few domestic animals; and such medical supplies as his increasing practice required his furnishing to all his patients.

The doctor selected and had located his new home site on the edge of one of the Sangamon River bottoms bordered by timbered bluffs. This tract of one hundred and sixty acres combined the three essentials of pioneer life—timber, water, and good land. He proceeded at once to build a log cabin near the center of the tract in order to hold a pre-emptor's right to both 80 acres, and intended to secure government title to it at his later convenience.

In those days, gold and silver coin was very scarce, and what little there was brought into the country quickly found its way into the land office for entry of land; a system of barter supplying its place in all ordinary transactions. The early settlers therefore usually deferred the entry of the tracts of land which they had selected. They built their house and raised one or more crops before purchasing at \$2 per acre their deed to the land at the United States land office. An unwritten law among them respecting these "squatter" claims made their occupancy as secure as though they held the government's deed. To violate these rights was to the early settlers the unpardonable sin.

Dr. Chandler received very little pay for his professional services, other than such products as his patrons could spare. These supplied him with provisions for his own family and for hospitable entertainment of those who traveled that way. He had been on his claim but a short time when a stranger named English came with the professed intention, as he said, of entering land and settling there. Later it was found that he was the agent of a Philadelphia capitalist who was investing in lands as a speculation. Dr. Chandler entertained him and his horse without charge, and exerted himself to accommodate and assist him, telling him all he knew about the country and its prospects in order to aid him in selecting a suitable location and becoming a settler.

English looked around awhile, but could find no land that pleased him as well as the doctor's claim did. Thereupon Dr. Chandler very generously offered to let him enter one of his eighty-acre tracts, being half of his own claim. This did not seem to entirely satisfy him; but he said he would go to Springfield after a few days more of prospecting and enter that if he could do no better. At his last interview with Dr. Chandler he showed a map he carried on which he had marked several other tracts of land, from which he said he might make his selection. After his last dinner with the doctor he left, saying he would pass the night with another settler on the way to Springfield, and while on his journey he would look at several other tracts of land.

That afternoon Dr. Chandler had several patients to visit and soon rode away toward Beardstown for such purpose. Near sundown another settler, who lived ten miles from Dr. Chandler and on the road leading to Springfield, came hastily riding up to Dr. Chandler's home, inquiring for the doctor, who had not yet returned. He said that he must see the doctor himself and would wait for his return. It was dark before the doctor returned to his home.

\* Personal Recollections of Abraham Lincoln by Henry B. Rankin (G. P. Putnam's Sons).



The neighbor then informed him that English, when he passed his place, had declared his intention to be in Springfield the next day and to enter not only the eighty acres the doctor had offered him, but his entire quarter section; and that he had plenty of land office money on deposit in Springfield to his credit for this and also for entering other tracts he had marked on his map.

The doctor was more than surprised, and did not relish the prospect of being ousted from his home in such a summary manner. He did not have enough money in specie to pay the government for the land at what was then the fixed price of \$2 per acre. No time was to be lost. None of his near neighbors had the gold and silver, and there was no time to go to Beardstown and get it there. His financial credit was good, but only gold and silver coin could help him in this emergency. In this quandary he mounted his horse and rode away. No one to whom he had applied had any money until he came to the cabin of his friend William McCaulley, who happened to have the amount the doctor needed. When told by the doctor in what exigency the treacherous "land shark" English had placed him he cheerfully loaned him the money.

It was midnight when he got back home. After hurried lunch, he changed his saddle and saddle-bags to the horse Mrs. Chandler had fed ready for his night trip to Springfield, forty miles away. His practice as a physician had extended over half that radius. With his knowledge of how to reduce distance by direct cross-country cuts, and taking the stars to guide his course, he started through the woods and prairies in a direct line, to save distance and cut in ahead of English. The undergrowth and tall grass made the route chosen a fatiguing one for the horse to travel over, under the rapid gait he urged him.

As he struck the Springfield road beyond Salem, his horse was so thoroughly exhausted that the doctor dismounted and led him, intending to leave him at the first cabin and try to reach Springfield afoot. He was yet twelve miles from his journey's end, and the sun more than half way to the meridian. In this extremity he was overtaken by a young man riding a spirited horse. The stranger reined up, and seeing both the jaded condition of the doctor's horse, and the evident urgency of the journey, inquired the cause. In a few words the doctor explained who he was, where he was from, and the great need he had for reaching Springfield before that man English.

The doctor, in telling the circumstances to my father afterward, said that the young man, without a word of reply, dismounted and hastily shortened the stirrup straps on his saddle to suit a pair of shorter legs, then thrust the longest pair of arms he had ever seen under the medicine-saddlebags on the doctor's saddle and swung them across the saddle of his own spirited steed, saying as he did so:

"There, doctor, mount my horse and leave me yours. Don't let any grass grow under his feet on the way; leave him at Herndon's stables, where I will have yours some time today for another 'horse swap.' I want to get you and your pill-bags and the specie coin in the land office ahead of that 'shark.' No thanks; just go."

The doctor said he never made a mount so quick as that in his life, and as he took up the reins, the young man gave the steed a sharp slap on the rump that started him down the road in a canter which he did not slacken until he rode up to Herndon's stables in Springfield, an hour before English arrived.

The Springfield land office records show that the first business transacted June 2, 1832, was the entry

by Charles Chandler of the lands on which he had built his cabin. Late the same day, Abraham Lincoln walked up to Herndon's stables, leading a forlorn looking horse. The young man had walked the twelve miles and redeemed his promise to "swap back again."

Later in the month, Dr. Chandler, having received remittances from the East, repaid Mr. McCaulley and made a more leisurely trip to Springfield to enter another forty acres adjoining his other land. Having acquired perfect title to all this land, he concluded to have it surveyed to establish accurately its metes and bounds. Making inquiry for a surveyor to do the work, he learned that a young man residing farther up the river, at a place called Salem, was a competent surveyor and thoroughly reliable. He sent word for him to come and survey the land. On his arrival Dr. Chandler was surprised and gratified to find in the surveyor the young man who had so quickly solved the apparently hopeless situation involving the title to his land. The fresh horse furnished by Abraham Lincoln to a stranger enabled him to beat English to the land office and thus save his home.

---

## OBITUARY

---

JAMES HENRY ELLIOTT, M.D.

Dr. James H. Elliott of West Plains, Councilor for the 27th District, died at his home September 25, after an illness of about ten days, age 46. Dr. Elliott graduated from the Kentucky School of Medicine at Louisville, 1908, and the University of Louisville Medical Department, 1909. His early education was received in Howell County where he has lived since early boyhood. He has been a member of the Howell County Medical Society for many years and was well known among the medical profession throughout the state. He was president of the Southwest Missouri Medical Association in 1916, and has held various offices in the Howell County Medical Society.

---

## NEWS NOTES

---

DR. W. A. CLARK of Jefferson City has been appointed penitentiary physician to succeed Dr. James C. Welch, resigned.

DR. FREDERICK A. BALDWIN, who recently resigned as pathologist and bacteriologist of the city of St. Louis, has assumed full charge of the Virchow Laboratory, 3700 Morgan Street, St. Louis.

THE death of Dr. James H. Elliott, Councilor of the 27th District, created a vacancy which the president, Dr. R. E. Schlueter, has filled by appointing Dr. H. C. Shuttee of West Plains.

DR. PORTER E. WILLIAMS of Bunceton has been elected Superintendent of the State Hospital No. 2, at St. Joseph to succeed Dr. E. H. Bullock. Dr. Bullock has been appointed Land Reclamation Commissioner.

At the meeting of the State Board of Health in Kansas City, September 27, Dr. W. J. Ferguson of Sedalia was elected president for the unexpired term, vice Dr. G. O. Cuppidge, whose membership on the board had expired.

NINETEEN applicants wrote the examination before the State Board of Health, September 24 to 26, inclusive. Results of examination and applications for reciprocity will be considered at the meeting of the Board at Jefferson City, October 25. The next examination will be held in St. Louis on December 17 to 19, inclusive.

DR. FRANCIS REDER of St. Louis has returned from Chicago where he responded to invitations to address the Chicago Medical Society, Wednesday evening, October 17, on "Cavernous and Plexiform Angioma," and on Thursday afternoon, October 18, the American Association of Railway Surgeons on "Fractures of the Femur."

THE Surgeon-General of the Army has appointed Major Lewellen Sale of St. Louis Chief of the Medical Service for the special study and care of cardiovascular diseases at Camp Wadsworth, Spartanburg, S. C., and Major Oliver H. Campbell of St. Louis Chief of the Medical Service of the same study at Camp McArthur, Waco, Tex.

THE monthly medical journal *Pediatrics*, formerly edited by Dr. Wm. Edward Fitch, has been acquired by the *Medical Review of Reviews*, Dr. Fitch having been commissioned a major in the army. *Pediatrics* will no longer appear as a separate publication, but has been incorporated with the *Medical Review of Reviews* which will contain a separate department devoted to pediatrics beginning with January, 1918.

A SUPPLEMENTARY contingent for Base Hospital No. 21—Washington University Base Hospital—left St. Louis September 27 under the command of Capt. Walter S. Thomas. The physicians accompanying the contingent are: Capt. Walter S. Thomas, Capt. Raymond M. Spivy, Lieuts. Carl W. Eberbach, W. W. Horst, Edwin P. Lehman, Herbert L. McNeil, Wm. H. Olmsted, J. Edgar Stewart and H. McClure Young. The supplementary personnel of the command includes, further, thirty-five nurses, thirty from St. Louis, the other five being supplied from elsewhere, and forty-seven enlisted men.

THE Columbia Taxicab Company, 4539 Delmar Avenue, St. Louis, has established ambulance service with an equipment that seems to have omitted nothing for the comfort of the patient or the convenience of the physicians. The equipment includes electric fan, running water and porcelain stationary wash basin, hot air radiator and thermos bottles. Orders from country physicians to meet trains will be promptly obeyed.

DR. A. H. HAMEL, Council of the 20th District and president of the St. Louis Medical Society, has suffered another bereavement through the death of his father, which occurred on September 30. Dr. Hamel's wife died on February 22, after a protracted illness. The death of his father was most unexpected and came only four days after the family had gathered at the parental home in DeSoto to celebrate the eightieth anniversary of Mr. Hamel's birthday.

THE alumni of several medical colleges of the Southern states are arranging for a "home gathering" during the meeting of the Southern Medical Association at Memphis, November 12-15. The schools joining in this celebration are University of Nashville, University of Tennessee, Memphis Hospital Medical College, Lincoln Memorial University, College of Physicians and Surgeons, Memphis. The alumni of the above schools are requested to attend this meeting and should notify Dr. A. H. Wittenborg, 879 Madison Avenue, Memphis, Tenn.

THE fall meeting of the Southwest Missouri Medical Society will be held in Springfield, November 15 and 16. The sessions will be held in the assembly room of the Physicians' Club in the Woodruff Building. A portion of the time will be devoted to the consideration of medicomilitary topics. Several members have already consented to present papers bearing on the "Lesson of the War" from the medical standpoint, and it is hoped that others now on duty at training camps may be induced to forward papers to be read, or personally address the society on some phase of their military duties. Those who desire to present papers should address Dr. H. S. Hill, Secretary, Springfield.

A NEW YORK surgeon has been charged with violating an agreement that he made with a patient who has also sued a film producer for \$20,000 damages for exhibiting pictures of a Cesarean operation performed on her. According to press dispatches the woman permitted the surgeon to have motion pictures made while he performed the Cesarean section, but she stipulated that these pictures should be exhibited



only to medical societies in the interest of science. The surgeon later, according to the woman's complaint, sold the pictures to the film producers who exhibited them to lay audiences as well as to medical societies, and the woman feels that the notoriety thus thrust on her has damaged her to the amount asked for in her complaint.

---

THE twelfth annual meeting of the Medical Association of the Southwest, held at Kansas City, October 15, 16 and 17, was a very successful gathering, notwithstanding the absence of many members who have entered the service of the country in the present conflict. During the morning of each day of the meeting clinics were held in the numerous hospitals of Kansas City where visitors witnessed operations, demonstrations and examinations of patients. In the afternoon the papers were read and discussed. The oration on medicine was delivered by Dr. M. F. Engman of St. Louis, who spoke on "Amoebic Infections of the Skin." The oration on surgery was delivered by Dr. Frank Smithies of Chicago, Ill., his subject being "Clinical Manifestations of Gall Bladder Diseases; a Study of 1,000 Operatively Demonstrated Cases." At the banquet on Tuesday evening officers were elected and Dr. Edward H. Martin of Hot Springs, Ark., was elected president. Dr. F. H. Clark of El Reno, Okla., was reelected secretary.

---

THE Medical Department of the Army now has an enlisted personnel of over 69,000 men, compared with 6,600 just before the outbreak of the war. Nearly 13,000 officers had accepted commissions in the Medical Reserve Corps up to October 1; the Dental Reserve Corps now has over 2,600 commissioned officers and the Sanitary Corps about 240.

In organizing for war work the Surgeon-General's office has added sections on internal medicine; medical officers' training camps; medical military instruction; psychology; neurology and psychiatry; surgery; infectious diseases and laboratories; head, eye, ear, mouth and brain; military orthopedics; special hospitals and physical reconstruction; gas defense; food; office development and filing system.

The Surgeon-General's office now has over 500 clerks and messengers and more than 100 officers, compared with 140 clerks and messengers and 10 officers which made up its personnel in March, 1917. On October 1 the Regular Nurse Corps numbered over 300 members, with about 1,600 members in the Reserve Nurse Corps, as compared with 230 in the regular corps and 227 in the reserve corps in March, 1917.

A CORRECTION—Since the publication of the article "Beware of This Impostor" which appeared in our October issue, those of our members who patronized the Physicians' Record System Company have received their cabinets, etc., and are well pleased. The company is located in St. Louis and it is this change from their announced intention to locate in Rochester, Minn., which caused their mail to be returned marked "no such firm." This is a new company seemingly anxious to make good and we would not hinder the progress of any well meaning institution. We are glad to make this correction and only regret that the information did not reach us before the publication of our October number.

---

A SOCIAL service bureau in connection with the clinic has recently been established at the Barnard Free Skin and Cancer Hospital in St. Louis, Mo., to conduct a careful follow-up system. The patients are urged by notification cards to return to the clinic for treatment or are personally visited and investigation made as to the cause of their failure to report. Every effort is made to educate the individual with reference to his malady and much has been done in follow-up work in the field of cancer. In reporting on the effect of the educational work of the institution during the last year, Dr. Martin F. Engman, president of the medical board of the hospital and a recently elected vice president of the American Society for the Control of Cancer, states that material results have already been accomplished as evidenced by a large increase in the percentage of operable cases of cancer that are now admitted to the hospital. Dr. Engman adds that their "system of recording clinical conditions through routine photography, also the careful records taken in photographing various steps in the operative procedure in certain forms of cancer, are of immense educational advantage, not only to the surgeons of the institution, but to other medical men interested in the cancer problem."—*The American Society for the Control of Cancer.*

---

TYPHOID fever and other communicable intestinal diseases have been practically eliminated from the Navy by modern preventive methods. Surgeon-General Braisted states in a report to Secretary Daniels, in which he says:

"The health of the Navy is excellent and the training of personnel is not being interfered with at any of the training stations by the presence of communicable diseases. Practically the only diseases which have given much concern during the present war have been those of the respiratory type, which are spread mainly by nose and throat secretions, principally mumps and measles, which are associated with a low mortality rate or no mortality at all.

"This is in marked contrast to the experience of 1898, during the Spanish-American War, when the communicable intestinal diseases caused widespread damage and carried with them a high mortality rate. The application of recent medical science has practically eliminated such diseases from the forces afloat and ashore. Such modern methods for the prevention of intestinal diseases include preventive inoculations, the proper disposal of garbage and sewage, protection of food and water supplies from contamination, and the extermination of flies and their breeding places."

Records of the Bureau of Medicine and Surgery show that fewer than 10 cases of typhoid have been reported since the present war began.

grounds consist of twenty-five acres beautifully parked. The building is fireproof throughout, being constructed of concrete and steel, and represents the latest ideas in sanatorium construction. Every room opens on a concrete porch, many of the rooms having a private porch, private solarium, and private bath and toilet. These rooms can be used singly or en suite. A refrigeration system has been installed throughout the building. The fourth floor, devoted to the treatment of tuberculosis in children, was especially designed for the application of the Rollier method of heliotherapy. A school will be conducted for those children able to attend. The institution is thoroughly equipped so that all approved, modern medical and sur-



□ MOUNT ST. ROSE HOSPITAL ST. LOUIS, MO. ENLARGED AND IMPROVED □

MOUNT ST. ROSE SANATORIUM, St. Louis, has recently added a new edition at a cost of about \$140,000; the whole plant representing an investment of about \$350,000 or \$400,000. This institution is devoted exclusively to the care and treatment of tuberculosis in all its stages and in all its phases. It has the distinction of being the first institution of its kind in the middle west and was the earliest attempt in that section of the country in sanatorium treatment of tuberculosis; it is the only private institution of its kind in Missouri. It is conducted by the Sisters of St. Mary and was established by them in 1902. It is situated just beyond the city limits of St. Louis, 7 miles from the Court House, on an elevation overlooking the city and presenting a beautiful view of the valley of the River Des Peres and the Mississippi River. The

gical methods can be scientifically applied. Dr. Louis C. Boisliniere is the medical director, and is assisted by a medical staff consisting of a resident physician, laboratory technician, roentgenologist and a full corps of consulting specialists. It is an open hospital and any reputable physician may treat his own cases there if he so desires. Its research department is also open to any properly accredited workers in that line.

WASHINGTON University Medical School, which at the outbreak of the war extended the use of its equipment and the service of its instructors to the Government, has been chosen as the headquarters of the Officers' School of Oral and Plastic Surgery established by order of the Surgeon-General of the Army. The need felt today in war hospital staffs for men spe-



cially trained to care for wounds of the face and jaws has called for the organization of the new school. Officers in the Medical Reserve Corps, both surgeons and dentists, will be selected through the Surgeon-General's office and ordered to St. Louis for a period of training lasting three or four weeks, and will afterwards be sent in groups to all base and evacuation hospitals of the United States Army. Major Vilray P. Blair, who was called to Washington in recognition of his wide experience in oral surgery, will direct this work. A curriculum of intensive laboratory, clinical and didactic exercises has been prepared and will be offered in successive periods during the winter. The first contingent of about thirty surgeons and dentists will report in St. Louis to begin work October 15. The Surgeon-General has named Dr. Robert J. Terry, professor of anatomy in the Washington University Medical School, as Dean, and Dr. Hanau W. Loeb, Dean of the St. Louis University School of Medicine, chairman of the Curriculum Committee, who, together with Dr. Ernst Sachs, associate professor of surgery in the Washington University Medical School, secretary, will constitute the council. Major Blair, Drs. J. Rilus Eastman, Joseph C. Beck and T. H. Gilmer will contribute special lectures. The following faculty has been formed, chiefly from members of the Washington University and St. Louis University Medical and Dental schools: Drs. Walter M. Bartlett, E. P. Brady, Barney Brooks, W. T. Coughlin, F. H. Ewerhardt, Ellis Fischel, A. O. Fisher, Capt. Robert H. Ivy, John H. Kennerly, E. H. Keys, B. E. Lischer, Virgil Loeb, Sherwood Moore, W. F. Neuhoff, H. C. Pollock, Frank Rodgers, O. R. Sevin, D. M. Schoemaker, Carroll Smith, P. Y. Tupper, Meyer Wiener and G. B. Winter.

### MEMBERSHIP CHANGES, OCTOBER, 1917

#### NEW MEMBERS

George M. Hamilton, Coffman.  
Wm. J. Kinder, Alldrich.  
Howard O. Lienhardt, North Kansas City.

#### CHANGE OF ADDRESSES

W. E. Bess, West Plains to Sedalia.  
Cyrus D. Cantrell, Metropolitan Bldg. to 210-212-214 Hyde Park Bldg., 39th and Main Sts., Kansas City.  
Jerome E. Cook, 5728 McPherson Ave. to 5389 Berlin Ave., St. Louis.  
Ralph L. Cook, 2266 S. Compton to 3842 DeTonty, St. Louis.  
Wm. J. Ezickson, Webb City to Philadelphia, Pa.

O. P. Farrington, Waterloo, Neb. to Thayer, Kans.

J. D. Ferguson, Goodhope to Greenfield.  
Eugene C. Gehrung, 383 Westminster Pl. to 5463 Delmar Ave., St. Louis.

Roy R. Haley, St. Louis to Brookfield.

W. M. Hindman, Quitman to Burlington Junction.

Frederick H. Kampf, St. Louis to Chicago.

H. H. Kramolowsky, 1320 Temple Place to 5639 Julian Ave., St. Louis.

Drew Luten, St. Louis to Naval Hospital, Great Lakes, Ill.

Halsey M. Lyle, Kansas City to Waukegan, Ia.

Eugene F. McCarthy, 301 Wall Bldg. to 3805 Westminster Pl., St. Louis.

James F. McFadden, St. Louis to Jefferson Barracks.

James P. Neal, 311 Argyle Bldg., to 924 Rialto Bldg., Kansas City.

Henry A. Rohlfsing, 3503 Holliday, to 4565 Wichita, St. Louis.

Julius A. Rossen, 3501 Utah, to 3552 Lafayette Ave., St. Louis.

D. E. Schmalhorst, St. Louis to Junction City, Kans.

Erwin R. Schmidt, St. Louis to Chicago.

Louis W. Schreiber, 432 Metropolitan Bldg. to Mo. Athletic Club, St. Louis.

Edwin Shouse, Omaha, Neb. to Kansas City.

Herbert I. Taylor, St. Louis to New Bloomfield.

Waldemar Ude, 3458 Wyoming to 915 Bates. St. Louis.

E. P. Van Ardsdall, St. Joseph to Beardstown, Ill.

F. L. Whelpley, Kirkwood to Goldsboro, N. C.

Chas. A. Wiest, Stover to Kansas City.

Porter E. Williams, Bunceton to St. Joseph.

#### REINSTATED

E. S. McClelland, Desloge.  
A. C. Reynolds, Bethany.

#### DECEASED

James H. Elliott, West Plains.

## CORRESPONDENCE

### MISSOURI STATE SANATORIUM

Dr. S. A. Newman, superintendent of the Missouri State Sanatorium for Incipient Tuberculosis located at Mt. Vernon, has sent a letter to physicians in the state inviting their interest and cooperation to extend the usefulness of the institution. We believe this letter should receive general publicity and therefore publish it with the hope that Dr. Newman's plea will

arouse the general interest of the physicians in this institution. The letter follows:

The Missouri State Sanatorium for Incipient Tuberculosis has passed beyond the experimental stage; it is a positive success. Our records show about 90 per cent. of arrested cases, for incipients, and the percentage of improved and quiescent cases discharged, out of a large number of moderately advanced cases, is far greater than one would suppose.

The success or failure of this institution depends on whether or not we receive the full support of the physicians over the state; therefore, we desire your invaluable help in spreading the information broadcast over the state, of the great advantages offered here for the relief and cure of incipient cases; and emphasizing the necessity of sending cases here early enough that they may have every opportunity to recover and return to their usual vocations in life.

The institution affords room for 275 patients, with a few vacant beds at the present time; and a distinct preference is made, by our laws, favoring those who are not able to support themselves here. Those desiring to enter as county patients must go to the county court with a certificate from some reputable physician stating that they have pulmonary tuberculosis, and two witnesses who can testify as to the inability of applicants to support themselves at the sanatorium, and if proof is deemed sufficient, the law says "The court shall make an order committing them to the sanatorium for treatment, at the expense of the county and state." When the court order is received by us, we then send application and examination blanks, with address of nearest examiner, and when returned to us and accepted, they are ordered here for treatment.

Pay patients are charged \$50 per month in advance, which covers all necessary expenses here, except clothing, etc., but they must wait, also, until their papers have been approved.

Your sincere support is earnestly solicited, and in order to acquaint you further with the institution, we ask that you write for any information desired, and favor us with a visit, when convenient to do so.

Yours very truly,

S. A. NEWMAN, M.D.,  
Superintendent.

#### LETTER FROM DR. WM. J. MICHE

The following letter was written to Dr. Percy Newman in care of the St. Louis City Hospital by Dr. Miche, formerly of St. Louis, now lieutenant in the Medical Officers Reserve Corps. Dr. Newman has kindly given the letter to us for publication:

Regent Palace Hotel, Piccadilly Circus  
London, W., Aug. 31, 1917.

*Friend Dr. Newman:*

Just a few lines to say I had a rather nice trip across the ocean. The weather was ideal for a submarine, but fortunately we saw none. In the danger zone we had to wear life preservers, even while eating, and these soon became burdensome. However, now I am settled in this snug little hotel and enjoying London life immensely. I am attached to the King George V Hospital here and will be in London for some time. We have over 2,000 patients at present and always more coming. We receive the wounded about three days after being at the front. Of course those needing immediate operations are held at the base in France until they are able to be sent to London. Our hospital does such work as

bone plate, hundreds of fractures (many are reset after roentgen ray), removing of foreign bodies, etc. The hospital has twenty operating rooms which are going continually. The resident staff consists of Canadians (mostly), Red Cross, and London surgeons. I am on the administrative staff. My work consists of treatment, appliance of splints, supervising the dressing (nurses do all dressing here), allow patients out of bed, and get them ready to be transferred to auxiliary hospitals in the country for convalescence. The work is very interesting. The Carrel-Dakin treatment is used quite extensively in France. We get many cases with the tube still in the wound. You would be surprised to see the severity of some of the cases. Yesterday we sent about twenty cases of fractured skull in which decompression had been done to the auxiliary hospital. Pieces of skull as large as an orange are removed. You see the pulsating mass and wonder that they are alive. The soldiers are given a skull cap to wear which fits over the area where the bone was removed. Tell Dr. Hein the neurologists are doing quite a good deal of work here in London for "shell shock" and it would be a good plan for him to come over.

Got a letter from Smith and Young and they are in France. London is practically dark at night, but this has not interfered with cafes and theaters. Saloons are open two and one-half hours in the afternoon and three hours in the evening, 6:30 to 9:30 p. m.

The air raids have had little or no effect on London. Great searchlights can be seen on the clouds at night looking for airships. Never fear about starvation in England. Everything to eat here you want. However, sugar is scarce. The fare to ride in the subway is usually 2 cents and now they are going to raise the rate to 3 cents.

Well, Old Top, take good care of yourself and let me hear from you real soon. With best wishes.

LIEUT. WILLIAM J. MICHE, M. O. R. C.

My regards to the residents and seniors.

## MISCELLANY

### MISSOURI PHYSICIANS EXAMINED FOR COMMISSIONS IN MEDICAL RESERVE CORPS

We publish below the names of physicians who have applied for membership in the Medical Officers Reserve Corps since the last list was published in our October number. We will appreciate information from any members who discover errors in these lists. We know the list is not complete because we have been unable to obtain the names of physicians examined by some of the examining boards but we are doing the best we can to give prominence and honor to the physicians of Missouri who are responding to the call of the country in the present crisis. Not all the physicians named in these lists have been commissioned as some have been rejected for physical disability and for other reasons. We believe, however, it is proper and right that we publish the names of all who apply whenever we can obtain the correct information. We cannot give the present addresses but we are making an effort to send THE JOURNAL to those who enter the service as soon as we learn their location and will change the address of THE JOURNAL as often as the officer is moved from one station to another. The list follows:

Beedle, H. B., St. Louis; Bernard, Chas. A., Portage Des Sioux; Bina, Albert F., St. Louis; Bourn, J. J., Hannibal; Brewington, F. B., Bevier; Edwards, E. D.,



St. Louis; Flury, John A., St. Louis; Gorham, F. D., St. Louis; Holt, S. W., Steffenville; Huffman, J. W., St. Louis; Inman, Wm. B., St. Louis; Klippel, B. W., St. Louis; Latham, L. L., Latham; Meyer, C. B., St. Louis; Munier, E. B., St. Louis; Parsons, Clyde W., St. Louis; Peart, A. E., St. Louis; Presnell, U. A. V., Kennett; Reilly, J. J., St. Louis; Sample, Roy O., Fredericktown; Sample, Wm. D., Flat River; Schreiber, L. W., St. Louis; Shaffer, Philip, A., St. Louis; Stockwell, B. E., St. Louis; Winters, H. S., Oran.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.  
 Webster County Medical Society, Dec. 6, 1916.  
 Platte County Medical Society, Dec. 8, 1916.  
 Cape Girardeau County Medical Society, Dec. 15, 1916.  
 Livingston County Medical Society, Dec. 16, 1916.  
 Madison County Medical Society, Dec. 17, 1916.  
 Carter-Shannon County Medical Society, Dec. 20, 1916.  
 Atchison County Medical Society, Dec. 26, 1916.  
 Linn County Medical Society, Dec. 30, 1916.  
 Clark County Medical Society, Dec. 30, 1916.  
 Benton County Medical Society, Dec. 30, 1916.  
 Chariton County Medical Society, Jan. 1, 1917.  
 Schuyler County Medical Society, Jan. 5, 1917.  
 Crawford County Medical Society, Jan. 9, 1917.  
 Adair County Medical Society, Jan. 10, 1917.  
 Dent County Medical Society, Jan. 10, 1917.  
 Mississippi County Medical Society, Jan. 16, 1917.  
 Camden County Medical Society, Jan. 23, 1917.  
 Barton County Medical Society, Jan. 30, 1917.  
 Scott County Medical Society, Feb. 13, 1917.  
 Cooper County Medical Society, Feb. 21, 1917.  
 Gentry County Medical Society, Feb. 28, 1917.  
 Marion County Medical Society, March 1, 1917.  
 Ralls County Medical Society, March 13, 1917.  
 Perry County Medical Society, March 20, 1917.  
 Ste. Genevieve County Medical Society, March 27, 1917.  
 Reynolds County Medical Society, March 30, 1917.  
 Polk County Medical Society, April 7, 1917.  
 Pike County Medical Society, April 11, 1917.  
 Howell County Medical Society, April 17, 1917.  
 Cass County Medical Society, April 18, 1917.  
 Sullivan County Medical Society, April 20, 1917.  
 Ray County Medical Society, April 25, 1917.  
 Taney County Medical Society, May 1, 1917.  
 Vernon County Medical Society, May 10, 1917.  
 Dade County Medical Society, May 12, 1917.  
 Holt County Medical Society, May 14, 1917.  
 Carroll County Medical Society, May 23, 1917.  
 Pemiscot County Medical Society, June 6, 1917.  
 Laclede County Medical Society, June 13, 1917.  
 Johnson County Medical Society, June 27, 1917.  
 Moniteau County Medical Society, July 13, 1917.  
 Putnam County Medical Society, Aug. 5, 1917.  
 Audrain County Medical Society, Aug. 9, 1917.  
 Clay County Medical Society, Aug. 28, 1917.  
 Henry County Medical Society, Oct. 11, 1917.  
 Lafayette County Medical Society, Oct. 18, 1917.

## ST. LOUIS MEDICAL SOCIETY

Sept. 20, 1917

### REPORT OF THE COMMITTEE ON THE DEFENSE OF THE NATION

ROBERT M. FUNKHOUSER, ROBERT E. SCHLUETER,  
 R. EMMET KANE

This committee was created on April 21, 1917, by the St. Louis Medical Society for the purpose of coordinating all its medical activities incident to the war.

This committee proceeded with its work immediately and we are confident that no medical society in the country is in a position to present to those in authority a more comprehensive or patriotic report of local medical activity than the St. Louis Medical Society.

The Missouri State Medical Association at its Springfield meeting adopted a set of resolutions which your committee has used in part to systematize its work.

#### LOYALTY PLEDGES

The first resolution pledged the physicians of Missouri to express their loyalty to our government in the existing war. On February 3 the following resolutions presented to this society by Dr. Funkhouser of this committee were unanimously adopted:

WHEREAS, A condition has arisen in our relations with foreign powers requiring the utmost skill, courage and judgment on the part of our representatives; and

WHEREAS, The President has announced to the world that America stands ready to make any sacrifice for her principles and her honor; and

WHEREAS, The members of the St. Louis Medical Society in common with all other loyal citizens stand as a unit in supporting the policy communicated to Congress on February 3 by the President; therefore, be it

*Resolved*, That the members of the St. Louis Medical Society commend the action of the President in the latest European crisis and express full confidence in him and pledge to him their support in any action he finds necessary to take; and be it further

*Resolved*, That a copy of this resolution be forwarded to the President at Washington.

On April 21 the following resolution was presented by Dr. Kane of this committee and was unanimously adopted:

WHEREAS, Congress has declared that a state of war exists between the United States and Germany; be it

*Resolved*, That any member of the St. Louis Medical Society now or hereafter engaging in military or naval service with any power in war against the United States shall be deemed to be an alien enemy and thereby forfeit his membership in the society.

This same resolution was introduced by the same member at the meeting of the Missouri State Medical Association in Springfield, where it was again unanimously adopted.

On April 21 the following motion presented by Dr. M. A. Bliss was unanimously adopted:

That universal training is an obligation the government owes to its citizens, inasmuch as we have now and have always had universal liability to service.

That we believe in the administration measure for selective conscription as the only means fair and just to all in a democracy by which to raise a sufficient force for the protection of the country and at the same time to keep organized the industries of the country to the end that the fighting forces shall be properly supported and the folks back home properly cared for.

That a copy of this motion, signed by the President and Secretary of this society be sent to each congressman from St. Louis and to each senator from Missouri.

#### MEDICAL OFFICERS RESERVE CORPS

The second resolution of the State Association stated that those who may be required in actual (medical) service should volunteer their services. Reporting on this second resolution members of this committee have inserted frequent appeals and announcements relative to the volunteer medical service in the Army in the *Bulletin* of the society and at every opportunity the society has thrown its meetings open to the Medical Reserve Corps and to officers of the Army for the purpose of stimulating the interest of members in the needs of the medical branch of the service. The society has furnished without charge headquarters for the examining physicians of the Medical Reserve Corps together with all the accommodations at its disposal. On this occasion we are able to report 134 of our members in the Medical Reserve Corps. Their names were published in the last number of the *Bulletin*.

#### CARE OF PRACTICE OF ABSENT MEMBERS

The third resolution of the Missouri State Medical Association provided that those who remain at home should volunteer to care for the practice of those called to service and to turn over to them or to their dependents a liberal portion of the income of this work. Reporting on this resolution, the St. Louis Medical Society, through this committee, issued an appeal to all members to volunteer to care for the practice of those called to service, preparing a referendum vote on the portion of the income which should be turned over to the absent physician or to his dependents. Out of 850 members who received these cards, 508 volunteered their services, twenty-five suggested 25 per cent. as the amount to be turned over, 127 suggested 33.33 per cent., 343 suggested 50 per cent., and twelve voted amounts from 100 per cent. to 50 per cent. A special file has been prepared containing in a suitable card index the specialty, office hours, telephone numbers and other details which will facilitate carrying out this service.

#### STATE COMMITTEE

The fourth resolution called on the President of the Missouri State Medical Association to formulate definite plans for rendering this resolution effective. The referendum card returned by each of the above 508 members pledged him to abide by the decision of the majority, and this committee pledged the activity of the St. Louis Medical Society to the state committee with a promise to cooperate in all the work undertaken by the state committee to make the work of organized medicine during the war creditable and effective.

#### COOPERATION OF NONMEMBERS

The fifth resolution urged that all physicians not members of this Association be invited to join this plan of loyal professional service. A careful canvass of the local profession which has not affiliated itself with organized medicine was made in order that no invitation might be sent a wholly unworthy practitioner. Seven hundred and three letters were sent out from this office, not only inviting the nonmember to cooperate in this patriotic work, but enclosing an application for membership with an invitation to join the society in all of its work. Eighty-three replies were received pledging any service the nonmember might render and twelve applications for membership accompanied these replies. Thus it will be seen that only 11 per cent. of those not in organized medicine are willing to make a sacrifice for their absent brethren, whereas 60 per cent. of the organized profession are willing to volunteer this service.

#### PUBLICITY

The sixth resolution of the State Association requested that a copy of these resolutions be furnished the press for the information of all the medical profession and that as soon as possible these plans be submitted to each component society for approval. Immediately on their return from Springfield the delegates of the St. Louis Medical Society presented the State Association resolutions to this society, where they were immediately unanimously approved. The resolutions themselves were published in the *Bulletin* of the St. Louis Medical Society of May 24 and copies were furnished by this committee to each of the newspapers in St. Louis for the information of the public.

#### ARMY, NAVY AND RED CROSS AID

In addition to the above-mentioned activities suggested by the Missouri State Medical Association, your committee has actively cooperated with the Navy Department, the American Red Cross and the officers of the local militia to the end that any one applying for enlistment in any branch of the service with a disqualifying impediment which could be relieved by medical or surgical aid would be properly attended by a member of this society without charge. We have further given our assistance to the families and dependents of enlisted men, and as a consequence 159 cases of relief have thus far fallen to our lot. These cases are allotted in alphabetical order to that portion of our membership which has volunteered its services.

#### FREE HOSPITAL SERVICE

We have taken up with the hospitals in the city of St. Louis the pledging of rooms and beds in wards for the care of soldiers and their families and received favorable replies from every hospital appealed to. They are the Jewish Hospital, Lutheran, Deaconess, Barnard Free Skin and Cancer, Barnes, St. Mary's Infirmary, St. Luke's, St. Louis Mullanphy, St. John's, Mount Saint Rose, Missouri Baptist Sanitarium, Baptist Hospital and St. Anthony's.

#### FREE AMBULANCE SERVICE

In response to our solicitation Peetz Brothers of 2739 Lafayette Avenue have volunteered the use of their ambulance, this service together with that of the hospitals being pledged without cost either to the patient or to the government.

#### COOPERATION OF DRUGGISTS

Your committee communicated with a number of retail druggists in various parts of the city requesting them to furnish drugs and dressings at cost or in indigent cases free of charge.

We have received favorable replies from Thomas Halpin, J. P. Huhn, Jantzen, Judge and Dolph, Joseph Maserang, Raboteau, Swift Drug Company and the Metropolitan Pharmacy. This list will be greatly enlarged by further solicitation in a short while. In addition to the above, the wholesale houses of J. S. Merrill and Meyer Brothers request that they be called on if either of their houses can be of assistance to the society in its work for the war.

#### COOPERATION OF INSTRUMENT HOUSES

An appeal was sent to the surgical instrument houses of C. W. Alban, A. S. Aloe, Medical and Surgical Supply Co. and H. E. Lehde requesting that crutches, corrective apparatus and surgical supplies be furnished soldiers and their families at cost, and in every instance a favorable response was received.



## CANCELLATION OF DOCTORS' LEASES

Communications were sent to the managers of the following office buildings occupied either largely or entirely by physicians asking that suitable concessions be made in the cases of tenants bound by lease and who volunteer for service in the Army: The Humboldt, Metropolitan, Olivia, Marina, Wall, Lister, Frisco, Central National Bank, Carleton, Delmar, Railway Exchange, Syndicate Trust, Security, Commercial, Times, and New University Club. The Delmar Building and the Lister promised to unconditionally cancel any lease on request. Isaac T. Cook of the New University Club stated that a war clause releasing the doctor from all lease liability in the event of his going into service has been inserted in every instance, pledging further that any doctor from the Carleton, Chemical, Wright or other buildings with which he is connected will have suitable arrangements made for him. The Frisco Building said that no physician would be held from going forward on account of a lease with the Frisco Building, promising to heartily cooperate with the society in all its efforts. J. H. Farish, speaking for the Humboldt and Metropolitan buildings, writes that physicians renting offices in either of these buildings will be relieved from the necessity of paying any office rent during the term of their service with the government, with the understanding that they will extend the term of their lease for a period of time equal to the term of their absence from the city. The Wall Building, while not committing itself to any definite policy, promises to take up individual cases as they arise. Replies from the other buildings have not thus far been received.

## OWEN AMENDMENT

Acting on the resolution presented to the society by Dr. Boisliniere and on request of the chairman of the committee of the Missouri State Medical Association, your committee prepared an endorsement of the Owen amendment and forwarded it to the senators from Missouri and the representatives of the tenth, eleventh and twelfth congressional districts. Pledges of support were received from all the representatives, a promise of thorough investigation by Senator Reed and no reply from Senator Stone.

## THE HOME GUARD

Believing that the medical profession should be fully prepared to aid the Home Guard should riot or other disturbance bring calamity into our midst, your committee has volunteered to raise a hospital unit fully equipped to take care of any local emergency.

## NAVY RECRUITING

Believing that we should render every aid possible to the government in perfecting its fighting as well as relief forces we offered the services of our committee to the recruiting department of the Navy, and through our efforts secured seventy-six recruits in Missouri and Illinois for active service in the United States Navy. The Navy being recruited to a sufficient size to meet the present call, no further activity in this direction is required, at the present time, but we have pledged ourselves to secure members of our society throughout the period of the war who will deliver addresses and engage in active recruiting duty whenever called on.

## WOMEN'S DIVISION OF DEFENSE

In addition to the above, we have aided in opening recruiting stations for the Navy in other cities and have accepted the invitation of the Women's Division of the National Council of Defense to make speeches on food conservation, health topics or to aid the women in any of their activities where the organized profession can be of assistance throughout the period

of the war. The committee arranged this building and donated it in the name of the society to the Women's Central Council on Food Conservation, where a two weeks' course was conducted during the summer months for the purpose of teaching women how to conserve food.

## HIGH COST OF FOOD

In this connection your committee calls your attention to the food condition of our community. Knowing how essential it is for the health of infants and the sick and infirm that they receive a proper and adequate food supply, we should not remain passive onlookers while the prices of ordinary food soar above the procuring abilities of the poor, but should be leaders in the fight against the cruel cornering of those commodities necessary for the lives and health of our weaker citizens. Particularly is this the case at the present time in the proposed advance in the price of milk to a figure which will mean starvation of hundreds of helpless little ones.

## CONSERVATION OF HEALTH

Believing that the conservation of health is at the present time a most patriotic service, we should lend every effort to the government in making its men and women of the present day and its children of tomorrow physically capable of bearing the burdens of citizenship. The draft having shown such a large percentage of men in their most active years to be defectives, unconscious of their ailments, the organized profession should immediately perfect plans for the free physical examination of every man, woman and child who desires to know the exact state of his health. We believe that our members will volunteer this service, and that the schoolbuildings, dispensaries and medical society building should be made available for this purpose.

## PUBLIC LECTURES

We recommend further that public lectures be arranged by the medical society, in cooperation with the local Red Cross, Chamber of Commerce, Business Men's Association, women's clubs, lodges and fraternal organizations, on preventive medicine in order that the lesson may be taught that a perfect citizen should as far as possible make of himself a perfect individual physically, mentally and morally as a patriotic duty.

## COURSES IN MILITARY SURGERY

We recommend that the medical colleges of St. Louis be requested to inaugurate courses in military surgery which may be attended by those physicians not yet called to the colors. In this way should the war last for a number of months or years groups of physicians now unacquainted with this class of surgery will be in a position to render efficient service to the Army in the field immediately after they are called.

## COUNTRY PRACTICE AND IRREGULARS

We recommend further that the Missouri State Medical Association be requested to communicate with the councilors of all the districts in Missouri asking that the office of the State Association be kept posted regarding the permanent or protracted absence of country physicians at the front. Unless something is done to fill these places, vacated by the best men in our profession, with other regular medical practitioners, the osteopath, chiropractor, quack and charlatan will not hesitate to seize his opportunity to locate in the community which has no doctor.

R. M. FUNKHOUSER.

R. E. SCHLUETER.

R. EMMET KANE.

On motion, the report was adopted and the committee discharged, and the thanks of the society extended to the committee for the splendid work performed.

## APPLICANTS FOR MEMBERSHIP

Any member of the society who knows a good or sufficient reason why any one of the following applicants is not eligible for membership in our society is requested to communicate at once with the Membership Committee:

Albert F. Bina, 2809 Magnolia Avenue. National University, 1915. Sponsors: J. Joseph Link, Frederick A. Baldwin.

David D. Goldberg, 2948 Thomas Street. St. Louis College of Physicians and Surgeons, 1889. Sponsors: Herman Tuholske, Lister Tuholske.

Frank W. Haynes, 5896 Delmar Boulevard. St. Louis University School of Medicine, 1911. Sponsors: Herbert Taylor, Roland Hill.

Hilray D. Meyer, 3551a Olive Street. National University of Arts and Sciences, 1916. Sponsors: Emanuel T. Urban, James M. Smith.

## BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society met in regular session at Butler, Thursday afternoon, Sept. 27, 1917, in the office of Dr. T. C. Boulware, and passed on the following resolutions:

We, the committee appointed by the Bates County Medical Society to draft resolutions concerning the sad and untimely death of one of our members, Dr. Floyd S. Bates, of Adrian, Mo., who was instantly killed by lightning while in the Army at Fort Riley, are deeply grieved over the death of so active, so efficient and so willing a servant to act in defense of his as well as our country in the present warfare with Germany.

In recording these resolutions we indorse the true sentiment of the entire medical profession throughout the state.

Dr. Floyd S. Bates had won for himself the highest esteem due to any young physician who had but reached the gateway opening up to him the prospective fields of a bright and prospective future, when he left it all and turned about, faced the command to follow the flag of his country into foreign fields to fight for the rights and freedom of nations.

WHEREAS, If it was God's will to remove from our midst and from the bloody battle grounds of Army activity, one willing to dedicate his service and his life to helping the sick and wounded in war, we should bow submissively to His command who knows all things, and does all things for the good of all mankind; therefore be it

*Resolved*, That we extend to the bereaved father and mother, wife and children our heartfelt sympathy in their great loss of son, husband and father, and knowing that anything that we may say or do at this time will not heal the wounds of a broken heart—nothing but blessed God-given time will soothe the sorrow and offer true condolence to those in great distress; be it further

*Resolved*, That copies of these resolutions be sent to each member of the family of the deceased and that a copy be spread on the minutes of this society; also a copy be sent to THE JOURNAL of the Missouri State Medical Association.

T. F. LOCKWOOD.  
E. N. CHASTAIN.  
T. W. FOSTER.

The society did not carry out its program as outlined, and with no other business it was moved by Dr. Chastain to adjourn, the next meeting to be held at Clinton, Oct. 10, 1917. This is the date of our regular Tri-County Meeting.

J. S. NEWLON, M.D., Secretary.

## BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, October 3, and was attended by seventeen members, Dr. F. Spencer in the chair. The minutes of the previous meeting were read and approved.

A communication from Major T. D. Woodson, Office of the Surgeon General, Washington, D. C., requesting a list of the partially disabled in our county who are successfully following a trade or occupation, was read, and the secretary instructed to acknowledge receipt of same.

The application of Dr. P. E. Williams for membership in our society by transfer from the Cooper County Medical Society, was acted on and the doctor was duly elected a member of our society.

On motion of Dr. Bansbach, seconded by Dr. Gray, which was carried, the chairman was instructed to appoint a committee to investigate the Whittington Hospital and if they saw fit, urge and call on the mayor and city council to carry out the changes recommended by the board of health in connection with the above hospital. Drs. Woodson, Gray and Ladd were appointed and instructed to make a report of their recommendations at the next meeting of our society.

Dr. Woodson gave a very interesting report on the papers he heard read at the meeting of the Missouri Valley Medical Association at Lincoln, Neb.

The paper of the evening was read by Dr. P. I. Leonard on "Reflections About the Ear, Nose and Throat," which was discussed by Drs. Pitts, Woodson, Ladd, Miller and Farber, Dr. Leonard closing.

Dr. Bansbach reported a case of stone in the bladder, successfully removed with an evacuator.

Adjourned.

W. F. GOETZE, M.D., Secretary.

## CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society met in the office of Dr. W. E. Yount at 8 p. m., October 8, with the following members present: Drs. Cunningham, Hope, Howard, D. I. L. Sebaugh, O. L. Sebaugh, Wichterich, Yount and Wilson.

A small amount of routine business was transacted, after which the program was called.

Dr. Cunningham read an interesting paper on "The Therapeutic Uses of Adrenalin Chlorid." The paper was instructive and showed that the essayist had had considerable experience with the drug, and that there are no doubt other uses for the preparation which have not been discovered as yet by the profession.

Dr. Yount gave interesting remarks on acute inflammatory conditions of the eye—diagnostic points. Special emphasis was laid on the idea of not using a preparation without making a complete diagnosis, for sometimes the agent used will aggravate conditions and then be confused as to why good results were not accomplished.

A liberal discussion followed both papers.

E. H. G. WILSON, M.D., Secretary.

## CLAY COUNTY MEDICAL SOCIETY

ORGANIZED 1854

The Clay County Medical Society met at the Snapp Hotel in Excelsior Springs, Monday evening, September 24, with fifteen enthusiastic members present. At this meeting, Dr. H. O. Lienhardt of North Kansas City became a member.

Dr. C. J. Morrow, whom our members almost consider one of them, gave a splendid paper on "Stricture of the Male Urethra." At the outset Dr. Morrow apostrophized on the age of the society and spoke feelingly of its founders. The Clay County Medical



Society is one of the oldest societies in the state. The essayist said that notwithstanding this age of specialism, we still had to rely much on the keen intuition and diagnostic ability of the "good old country doctor."

Dr. Morrow's paper was replete with good things, his "gradual rapid method of dilatation" being his leading thought, evolved by his own investigations. He condemned internal cutting operations, and procedures which drew blood from the canal. He went into the pathology of the condition, from initial stage to the formation of the yellow elastic tissue. He advocated the external urethrotomy in patients over 50 years of age who happened to have conditions resulting from past mismanagement, such as divulsion, improper cutting, etc. He said that a large number of prostatic cases in elderly men were the results of strictures that approximated the caliber of the meatus and had existed for many years.

The paper was fully discussed by all present and a diversity of experiences followed. Dr. Morrow closed with clinching facts and all profited by the meeting.

Dr. J. H. Thompson, one of the pioneer eye specialists of Kansas City, was present, renewing old associations. During the evening he added to the interest by a talk on gonococcus infections, requesting that Dr. J. H. Rothwell follow him, and then "the ball opened." Science, reminiscence and positive outlawry! Self-limitation, cure, immunity, serotherapy—nothing tangible in the here or heretofore was omitted. You missed it, doctor, if you were absent. Now, do not let it occur again. There will be a program at the next meeting that no up-to-date man can afford to miss. Keep your eye on this column.

J. J. GAINES, M.D., Secretary.

#### **GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY**

The Gasconade-Maries-Osage County Medical Society met in Argyle, Mo., Sept. 27, 1917. The following members were present: Drs. C. T. Leach, F. J. Wessling, J. O. Cooper, S. E. Gaston, H. G. Isenberg, J. J. Rademacher and John D. Seba. The following visiting physicians were also with us: Drs. Charles Wyche, St. Louis, and I. M. Owens, Gerald.

As there was an abundance of clinical material present, they were attended before the meeting went into executive session. After this the election of officers for the year 1918 was conducted with the following result: president, Dr. J. O. Cooper, Linn; vice president, Dr. C. T. Leach, Bland; secretary and treasurer, Dr. John D. Seba, Bland (reelected).

Dr. A. F. Bugg of Belle, formerly of Corridon, Reynolds County (Mo.), was elected to membership in our society on transfer.

At the night session Dr. Seba presided, while Rev. Father Rieppen and Dr. Wyche entertained the public. Father Rieppen spoke of the necessity of having proper medical laws enacted for the protection of the public health. Dr. Wyche spoke on the same theme and presented some very interesting stereopticon pictures showing pathologic conditions in children afflicted with adenoids.

On motion, it was voted to have the next meeting at Linn, in the Osage County Court House, on Thursday, Oct. 25, 1917, the scientific program to be rendered in the afternoon and the public health meeting to be held at night.

JOHN D. SEBA, M.D., Secretary.

#### **HENRY COUNTY MEDICAL SOCIETY**

The Henry County Medical Society met in regular session at Clinton, Oct. 10, 1917, with the Tri-County Medical Association in attendance. Present were Drs. C. W. Head, J. H. Walton, T. A. Blackmore, H. M. Wall, R. J. Jennings, of Windsor; W. Cline, R. J.

Smith, E. C. Peclor, St. Clair; Thomas Gray, W. R. Reynolds, J. S. Newlon, T. W. Foster, Bates; Will P. Bradley, J. T. Hornback, Vernon; J. J. Russell, C. F. Howard, W. L. Martin, G. W. Berry, B. B. Barr, R. D. Haire, A. J. McNees, J. R. Hampton, J. G. Beaty, S. A. Poague, S. W. Woltzen, N. I. Stebbins, L. L. Smith, J. G. McDonald and F. M. Douglass.

The meeting was called to order by President McNees at 2 p. m. The minutes of the previous meeting were read and approved.

Dr. Herman E. Pearse of Kansas City read a paper entitled "Cause of Death in Fibroid Tumor," with lantern slide illustrations. This was a lecture that was a pleasure to listen to, giving us new ideas to think about, with the many reasons for them. He spoke of and advised a treatment that would give better results and lessen the death rate in very many cases. The instruction given was enhanced by the essayist's convincing manner of expression, fixing the subject matter in the minds of the hearers.

A pleasing discussion followed by Drs. Stebbins and J. T. Hornback; Dr. Pearse closed by adding some advice that is good to follow.

Dr. Hugh D. Hamilton of Kansas City, having arrived, gave a talk on "Gastric Symptoms Without Gastric Disease." To explain his subject he gave a history of numerous cases, the examinations he made and what they proved, claiming that it was very necessary to get a full history, making all the tests to eliminate all other organs and parts of the body that might be involved. This paper was discussed at some length by Drs. Blackmore and McNees, each giving a number of cases where a rigid examination disclosed a fault in other parts than the stomach.

F. M. DOUGLASS, M.D., Secretary.

#### **JOHNSON COUNTY MEDICAL SOCIETY**

The Johnson County Medical Society met in regular session at Warrensburg, Oct. 2, 1917, with the president, Dr. L. J. Schofield, in the chair.

A communication from the War Department was read setting forth the efforts of the Surgeon General to obtain information as to how partially disabled men are most successfully gaining a livelihood. This in pursuance of the efforts of the Medical Department of the United States Army, to establish ways and means to produce functional restoration of damaged parts and vocational reeducation for those who from the nature of their illness or injury are unable to follow their previous occupation.

The secretary was instructed to send to each physician in Johnson County a list of the following questions: 1. Character of disability, medical or surgical? 2. At what is the patient employed and how successful? 3. In what way did he learn or enter this occupation after his illness or injury?

Dr. William R. Patterson presented a paper on the subject, "The Use of Proprietary Medicines." The paper brought out the unprofessional tendency of the use physicians are constantly making of unethical and commercialized compounds and nostrums which are today flooding the market.

The discussion which followed clearly pointed to the fact that those present were not in sympathy with the use of any proprietary medicines, except those which are strictly ethical pharmaceuticals, bearing the printed formula and names which are not misleading nor devised simply for commercial purposes.

The paper and discussion both indicated that a National Bureau of Medicine would prove the source of relief from many evils which now confront the medical profession.

Dr. J. W. Bolton read a paper on the subject, "Under What Conditions Should a Patient Suffering from Tuberculosis Be Advised to Change Climate?" The author was not favorable to sending patients with consumption where climate alone would be the only ad-

vantage. He deemed it far better for the patients to remain at home under the care of the family physician with strict adherence to the principles of fresh air, physiologic rest, wholesome food and pleasant surroundings.

It was directed that the next meeting be entirely devoted to clinical work, followed by a luncheon and general social time.

O. B. HALL, M.D., Secretary.

#### PLATTE COUNTY MEDICAL SOCIETY

The Platte County Medical Association held a banquet at Hotel Dearborn, September 12, the speakers for the evening being Dr. Goodwin of St. Louis, Secretary of the State Medical Association, and Dr. Jabez N. Jackson of Kansas City. Dr. Goodwin talked on "The State Association" and the help that county associations received from its conferences, while Dr. Jackson spoke on "The War and the Duty of the Medical Fraternity" in this great crisis.

Covers were laid for fourteen, those in attendance being: Dr. E. J. Goodwin, St. Louis; Dr. and Mrs. Jabez N. Jackson, Kansas City; Dr. and Mrs. Clark, Platte City; Dr. and Mrs. A. S. Herndon, Camden Point; Dr. L. C. Calvert and Miss Thorne, Weston; Dr. and Mrs. S. L. Durham, Dr. M. H. Moore and daughter, Miss Virginia, and Dr. J. M. Hale, Dearborn.

#### SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met at Queen City, Oct. 4, 1917, in the office of Dr. B. W. Hight. The meeting was called to order at 2:30 p. m. by the president, Dr. B. B. Potter. The following members were present: Drs. B. W. Hight and W. H. Zieber of Queen City; B. B. Potter, W. A. Potter, W. F. Justice and J. H. Keller of Lancaster; H. E. Gerwig, A. J. Drake and J. B. Bridges of Downing.

The minutes of the last meeting were read and approved.

A number of communications were read, discussed and tabled.

Dr. H. E. Gerwig read a very interesting paper on Acute Gastritis, which was discussed by the members.

There being no other paper by local talent, Dr. W. A. Potter read an article from the *Journal of Surgery, Gynecology and Obstetrics* by Dr. Willard Bartlett of St. Louis. It was a very able and interesting article and brought out a liberal discussion by the members.

The next meeting will be held at Downing, November 8. The subject selected for that meeting is Diseases of Gallbladder; Dr. B. W. Hight, surgery; Dr. J. B. Bridges, etiology, and Dr. W. A. Potter, medical treatment.

J. B. BRIDGES, M.D., Secretary.

#### WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held its quarterly meeting at Rogersville, Mo., Oct. 3, 1917. The meeting was called to order by the vice president, Dr. W. F. Schlicht. Drs. Sayers, Atkins, Schlicht, Highfill and Bruce responded to the roll call. The minutes of the last meeting, held at Bell Spring, were read and approved.

Dr. Highfill reported that the case he reported at the last meeting had gone on to an uneventful recovery.

Dr. Bruce reported a case of scrotal anus in a newborn child which is a very rare condition. The patient improved after a new anus had been made, although both orifices are still discharging bowel contents at this time.

The society voted in favor of the resolution concerning the care of the practice of members who may

be called to the service of our country during the war, namely, that those who remain at home shall care for and turn over to the doctor or his dependents a liberal portion of the receipts of his practice while away.

The society indorsed the action of Dr. E. H. Roberts of our society who joined the Medical Corps of the Regular Army and was sent to Washington, D. C.

Dr. Atkins presented a case of a small boy who received a gunshot wound of the right thigh which tore away part of the flesh and about 2 inches of the femur.

It was voted to hold our next meeting at Marshfield in November, and in order that the public may have a better conception of the purpose of medical organization, it was decided to hold an evening session open to the public, and that papers be read for the benefit of the general public.

J. R. BRUCE, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**CONCENTRATED SOLUTION SODIUM HYPOCHLORITE-MULFORD.**—A 5 per cent. aqueous solution of sodium hypochlorite containing free chlorine equivalent to 0.2 to 1.0 per cent. of sodium hypochlorite. One volume is diluted with nine volumes of water and the amount of boric acid required (stated on the label) to render the solution neutral is added. This dilution is used in the irrigation method of treating infected wounds. The H. K. Mulford Company, Philadelphia (*Jour. A. M. A.*, Sept. 1, 1917, p. 727).

**CALCREOSE.**—A mixture containing approximately equal weights of creosote and lime in chemical combination. It is stated that, when administered internally, calcreose has the same actions as creosote. It is claimed that it is not likely to produce gastric distress, nausea or vomiting. Calcreose is sold in the form of powder, as Solution Calcreose and as Calcreose Tablets, 4 grains. The Maltbie Chemical Co., Newark, N. J.

**BETANAPHTHOL BENZOATE-CALCO.**—A brand of betanaphthol benzoate, complying with the New and Nonofficial Remedies standards. The Calco Chemical Co., Bound Brook, N. J. (*Jour. A. M. A.*, Sept. 8, 1917, p. 821).

**THIOL-COL-ROCHE.**—Thiocol is the potassium salt of orthoguaiacol sulphonic acid, obtained by sulphonating guaiacol. Thiocol-Roché acts as a sedative expectorant. It has the advantage over guaiacol in that it is comparatively tasteless, does not disturb digestion and is nontoxic. It is claimed to be useful in the treatment of diseases of the respiratory tract, incipient tuberculosis and certain diarrheas. Thiocol-Roché is supplied in the form of a powder, as Syrup-Thiocol and as Thiocol-Roché Tablets, 5 grains. The Hoffmann-La Roche Chemical Works, New York (*Jour. A. M. A.*, Sept. 15, 1917, p. 911).

**DICHLORAMINE-T. ABBOTT.**—Paratoluenesulphonatedichloramide. This is said to act much like chlorazene, but capable of being used in solution of eucalyptol and liquid petrolatum, thus securing the gradual and sustained antiseptic action. Like chlorazene,



dichloramine-T, Abbott is said to act essentially like the hypochlorites, but to be less irritating to the tissues. Dichloramine-T, Abbott is said to be useful in the prevention and treatment of diseases of the nose and throat. It has been used with success as an application to wounds, dissolved in chlorinated eucalyptol and chlorinated paraffin oil. The Abbott Laboratories, Chicago.

**CHLORINATED EUCALYPTOL-DAKIN.**—Eucalyptol chlorinated at ordinary temperature. It is used as a solvent for dichloramine-T. The Abbott Laboratories, Chicago.

**CHLORINATED PARAFFIN OIL-DAKIN.**—Liquid petrolatum, chlorinated at ordinary temperature. It is used as a diluent for solutions of dichloramine-T in chlorinated eucalyptol-Dakin. The Abbott Laboratories, Chicago.

**HYCLORITE.**—A solution of chlorinated soda, each 100 Gm. being stated to contain sodium hypochlorite 4.05 Gm., sodium chloride 3.20 Gm., calcium hydroxide 0.25 Gm., inert salts 0.92 Gm. It contains not less than 3.85 per cent. available chlorine. Hyclorite has the action and uses of solution of chlorinated soda, U. S. P., but its available chlorine content is greater. One volume of hyclorite diluted with seven volumes of water has the same available chlorine content as neutral solution of chlorinated soda-N. N. R., and is said to be isotonic. The available chlorine content of hyclorite decreases at the rate of about 12 per cent. per year. In order that allowance for this deterioration may be made in the preparation of dilutions to be used in the irrigation treatment of wounds, each bottle of hyclorite bears the date of bottling. The General Laboratories, Madison, Wis. (*Jour. A. M. A.*, Sept. 29, p. 1081).

### PROPAGANDA FOR REFORM

**CHAMLEY, CANCER QUACK.**—S. R. Chamley, sometimes spelling his name Chamlec, is the "cancer cure" quack who frightens impressionable women into the belief that "any lump in woman's breast is cancer." In spite of repeated prosecutions by the postal authorities, he is still active. Now he offers to instruct homeopaths and eclectics in the "cancer cure" business. Chamley asks that mail be sent to "Homeopathic Cancer College," Los Angeles, Calif. (*Journal A. M. A.*, Sept. 1, 1917, p. 749).

**BON-OPTO.**—Bon-Opto is advertised to make weak eyes strong. The following nonquantitative and meaningless formula is furnished: "Chloretone, Zinc Sulphate, Sodium Chloride, Boric Acid, Menthe Poivre, Camphre de Menthe." The state chemists of New Hampshire report that Bon-Opto contains: sodium chlorid (common salt), 39.52; zinc sulphate (white vitriol), 6.83; boric acid, 39.69; menthol, a small amount (*Jour. A. M. A.*, Sept. 1, 1917, p. 750).

**WILSON'S WA-HOO BITTERS.**—"C. K. Wilson's Original Wa-Hoo Bitters" was sold as a "Great Blood and Nerve Tonic" and as an unfailing specific for partial paralysis, St. Vitus Dance and all forms of weakness. Federal chemists reported the product to be a watery solution (slightly sweetened) of Epsom salt, salicylic acid and a laxative plant drug with indications of sassafras, gentian and prickly ash. The therapeutic claims were declared false and fraudulent by the government authorities (*Jour. A. M. A.*, Sept. 1, 1917, p. 750).

**FERRIVINE, INTRAMINE AND COLLOSOL IODINE.**—The Council on Pharmacy and Chemistry reports that Fer-

rivine, Intramine and Collosol Iodine, sold in the United States by E. Fougere & Co., Inc., were found inadmissible to New and Nonofficial Remedies. Ferrivine and Intramine are advertised for the treatment of syphilis, while Collosol Iodine, mercury and iodides are recommended as adjuvants. A carefully controlled clinical trial made by L. W. Harrison and C. H. Mills and reported in the *Lancet* indicated that Ferrivine and Intramine are inefficient as spirocheticides and that the local and general reactions that follow the injection are severe. They say that in the case of Intramine "the pain is undiluted torture" (*Jour. A. M. A.*, Sept. 8, 1917, p. 841).

**TYRAMIN AS AN ADJUNCT TO MORPHIN IN LABOR.**—Henry G. Barbour, Yale University Medical School, aided by a grant from the Therapeutic Research Committee of the Council on Pharmacy and Chemistry, has studied the effects of tyramin on the action of morphin in labor. In labor morphin exhibits one desirable effect, analgesia, and two untoward results, namely, respiratory depression in the child and delay of labor. Experimental work at Yale having given no support to the use of scopolamin as an adjunct to morphin in labor, tyramin and similar bodies were studied. Animal experiments demonstrated that tyramin (para-hydroxy-phenyl-ethyl-amin-hydrochlorid) counteracted the respiratory depression of morphin. In man, from 40 to 50 mg. of tyramin, administered simultaneously with a therapeutic dose of morphin of 16 mg., completely antagonized the depressant action of morphin on the respiration. The effects of morphin-tyramin on normal labor is being studied at Yale. So far it appears that analgesia is as complete as if morphin were given alone. The respiration of the mother is increased rather than depressed and the condition of the children is quite satisfactory. Further, the uterine contractions have always been increased in frequency and in degree (*Jour. A. M. A.*, Sept. 15, 1917, p. 882).

**MUSTEROLE POISONING.**—D. I. Macht reports the case of a scarlatiniform eruption, evidently caused by an application of Musterole, a proprietary composed essentially of lard or some similar material, oil of mustard, menthol and camphor. Macht reports on the effects of mustard oil and warns against its careless use (*Jour. A. M. A.*, Sept. 15, 1917, p. 901).

**EMETIN DIARRHEA.**—Emetin not rarely produces a bloody diarrhea in the course of its clinical use in the treatment of amebic dysentery. The symptoms and the gross appearance of the stools in emetin diarrhea are almost indistinguishable from those of amebic dysentery. Contrary to a prevalent opinion, children are not especially resistant to the effects of emetin, and the dosage for them must be graduated with great care (*Jour. A. M. A.*, Sept. 15, 1917, p. 916).

**SPURIOUS NEOSALVARSAN.**—"Dr." Nicholas Clements is under indictment in New York City for manufacturing and selling imitation neosalvarsan. The material was put up in packages made to resemble in outward appearance the genuine article. It proved to be common salt colored yellow (*Jour. A. M. A.*, Sept. 15, 1917, p. 930).

**PIERCE'S ANURIC TABLETS.**—According to the World's Dispensary Medical Association, Anuric is the newest discovery in chemistry, whereas, in fact, it is a worthless and dangerous nostrum sold as a cure for kidney disease. The A. M. A. Chemical Laboratory reports that from a qualitative analysis, Anuric Tablets contained sugar, acetate, iodid and salicylate of either so-

dium or potassium, quinine, aloin, hexamethylenamin and plant drugs. The composition of the tablets was so evidently irrational and absurd that an exhaustive analysis was not deemed worth while (*Jour. A. M. A.*, Sept. 15, 1917, p. 930).

**VENARSEN.**—F. A. Brayton used Venarsen in a series of active syphilitics to determine its therapeutic value. The clinical study was made because many physicians consider this sodium cacodylate preparation as an efficient substitute for salvarsan, even referring to it as "Denver salvarsan." His study confirms the experience of others, namely, that Venarsen is worthless in the therapy of syphilis. He also reports that a venous sclerosis was produced in each case in which the drug was administered and that it is capable of producing a severe nephritis (*Jour. Ind. State Med. Assn.*, Sept. 15, 1917, p. 339).

**VOLATILE IRRITANTS IN COLLAPSE.**—To determine the action of so-called circulatory stimulants that are commonly administered by subcutaneous injection in shock or allied conditions, Lieb and Herrick have studied the effects of injections of alcohol, ether, camphor and ether, camphor and oil, and turpentine in animals decerebrated so that the pain factor would be entirely excluded. They conclude that the transitory rise in blood pressure that these medicaments produce is entirely reflex in character. The heart plays little or no part in the process, the response being effected through the vasomotor apparatus. The use of injections of camphor in oil, or camphor in alcohol, to stimulate an anesthetized or profoundly prostrated or unconscious patient, therefore, has no experimental justification and its employment is seriously to be questioned (*Jour. A. M. A.*, Sept. 22, 1917, p. 1008).

**WHEELER'S TISSUE PHOSPHATES.**—A leaflet devoted to the exploitation of Wheeler's Tissue Phosphates approvingly quotes the criticisms of the hypophosphites and the glycerophosphates by *The Journal A. M. A.* However, the leaflet fails to quote *The Journal's* estimate of the "Tissue Phosphates" which was: "Wheeler's Tissue Phosphates" is an unscientific shotgun mixture whose most active and powerful drug is the alcohol it contains. That it was not years ago relegated to the realms of obsolete and discarded preparations is a commentary alike on the lack of scientific discrimination and on the power of advertising" (*Jour. A. M. A.*, Sept. 22, 1917, p. 1010).

## BOOK REVIEWS

**ANNALS OF SURGERY, SEPTEMBER, 1917** (J. B. Lippincott Company, Philadelphia).

This is the "American Surgical Association Number" and contains papers read at the 1917 session of that important organization. The presidential address delivered by Dr. Samuel J. Mixter of Boston on "Conservatism in Surgery," is the leading article. This is followed by sixteen other papers. The volume contains 127 pages and is liberally illustrated.

**SURGERY, GYNECOLOGY AND OBSTETRICS, OCTOBER, 1917.**  
30 North Michigan Avenue, Chicago.

This issue contains twelve original articles on topics of very great interest. Among them is a paper by Dr. Willard Bartlett of St. Louis on "Subtotal Thyroidectomy." The leading article is "A Further Report of Eight Cases of Syphilis of the Stomach," by Dr. William A. Downes of New York. The Department of International Abstracts of Surgery contains a collective review on "War Injuries of the Skull," by Dr.

Daniel N. Eisendrath of Chicago, which is a comprehensively résumé of the articles published on this subject since the war began.

**SANITATION FOR MEDICAL OFFICERS.** By Edward H. Vedder, M.D., Lieutenant-Colonel, Medical Corps, U. S. Army, 1917. Lea & Febiger: Philadelphia and New York. Price, \$1.50.

This little book of 206 pages is authorized by the Secretary of War and compiled under the supervision of the Surgeon General of the Army and the National Council of Medical Defense. It contains useful information for the guidance of the medical officer and is especially appropriate for new members of the Medical Corps and the Medical Reserve Corps entering the service at this time. It is bound in convenient form to carry in the pocket of the uniform and interleaved with ruled pages for notes.

**WALL, OTTO A.** The Prescription Therapeutically, Pharmaceutically, Grammatically and Historically considered. Fourth and revised edition. St. Louis; C. V. Mosby Co., 1917.

Students of medicine and of pharmacy who desire to acquire a complete knowledge of what a prescription was, is and should be, will find all the necessary information on this subject in these pages. Practitioners of medicine and pharmacists will find it of great interest, and they will find many suggestions that will be of use to them. Of especial value and interest is the section on the use of the metric system in prescribing, and easy methods of acquiring the ability to write correct prescriptions of this kind are thoroughly explained.

It is readily seen that this little book is the result of years of observation and study on the part of Dr. Wall.

**HANDBOOK OF ANATOMY.** By James K. Young, M.D., F.A.C.S., Professor of Orthopedic Surgery, Philadelphia Polyclinic; Associate Professor of Orthopedic Surgery, University of Pennsylvania; Orthopedic Surgeon of the Philadelphia General Hospital. Fifth Edition, Revised and Enlarged with 154 engravings, some in colors. Philadelphia: F. A. Davis Company, Publishers. Pp. 435. Cloth. Price, \$2 net.

This book is now in its fifth edition, which speaks more loudly than any comment the reviewer might be able to offer. When one seeks the reason for this implied popularity one finds the answer in the high professional standing of the author and the clear concise manner in which the book is written. The whole field of anatomy is covered and it is the reviewer's opinion that if a student of anatomy learned such a brief book thoroughly he would be better equipped then than after trying to gain his knowledge from the ponderous volumes now in almost universal use.

A. E. H.

**A TEXT-BOOK OF FIRST AID AND EMERGENCY TREATMENT.** By A. C. Burnham, M.D., Medical Corps, U. S. R.; Instructor in Surgery in the Polyclinic Hospital, New York. Illustrated with 160 engravings and 2 plates. Lea and Febiger, Philadelphia and New York, 1917. Pp. 307. Cloth. Price, \$2.

This book is concise and, while intended for the use of the untrained first aid worker as the author states in his preface, it is not without interest to the medical man. The chapter on anatomy is illustrated by some very excellent cuts, and presents the subject matter in such a way as to attract the layman's attention. The chapter on fracture is all interesting and instructive. The chapter most likely to be useful to those for whom the book was intended is that on bandaging. The cuts illustrating this chapter are clear and any one retaining them in his memory should be able to apply a serviceable bandage.

While the reviewer would feel disposed to disagree with the author in matters of detail, these are matters of no importance in a book of this character.

B. A. P.



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies

Issued Monthly under direction of the Publication Committee

ADDRESS ALL COMMUNICATIONS TO 3517 PINE STREET, ST. LOUIS, MO.

Volume XIV

DECEMBER, 1917

Number 12

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION COMMITTEE { W. H. BREUER, M.D. Chairman  
S. P. CHILD, M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### AN OBSTETRIC RÉSUMÉ\*

F. T. VANEMAN, M.D.  
KANSAS CITY, MO.

As a preface to this paper, I wish to say that it is not a mass of quotations and statistics and that with the exception of a few brief references made to clinch a point, the entire substance is made up from conclusions drawn from my personal experience and observations of the work of other men in the local obstetric field.

Regrettable as the fact may be, we cannot but admit that obstetrics in the past has been treated with more or less indifference, and that as a distinct branch of medicine it has failed to keep pace with its fellows in the great onward march.

During the last few years, however, much progress has been made. Obstetrics is coming into its own, and before long the accoucheur will be accorded the place he deserves and the laborer will be considered "worthy of his hire."

Somewhat recently a busy surgeon spoke of obstetrics in a rather derisive manner, and then proceeded to tell of some of his early experiences and how he had, after applying forceps, braced his feet against the side of the bed and thus extracted the baby. It is to be hoped that in this day and age no one would be guilty of such practice; but I feel that there is still too much indifference displayed to this branch of medicine, and I am quite certain that this same surgeon as well as others owes a very fair percentage of his work to indifferent obstetrics.

Time necessitates but a brief review of my subject and we will therefore consider: (1) Normal cases with special reference to prenatal and postnatal care; (2) abnormal cases, with reference to various methods of delivery both by the natural channel and otherwise; (3) the use of pituitary extract; (4) the conduct of the

third stage of labor; (5) the conduct of the puerperium; (6) the management of the toxemias; (7) the management of placental abnormalities prior to labor; (8) the relations of the patient to the accoucheur.

First, a few words as to the most suitable environment for the conduct of labor: While most labors will always be conducted in the home, there is a growing demand for hospital facilities, and the hospitals are meeting this demand by establishing exclusive maternity departments equipped according to modern ideas, and these departments are nearly all running at full capacity.

The facilities thus offered give the physician a chance to do his best work at the minimum expense of energy and brings his work out in the open, which is in itself a great stimulus; furthermore, it brings a large number of cases together, affording splendid opportunity for observation and study; and last but by no means least, it is educational for the public and teaches them that childbirth is a dignified procedure, worthy of the best care and a respectable remuneration for the doctor. Naturally, all parties interested derive a mutual benefit. The hospital idea certainly should be encouraged wherever possible.

If Dr. DeLee's figures are correct, 10,000 women die in the United States in childbirth every year, and 20,000 more die from the direct or indirect effect of labor. Fifty per cent. of the women who have borne children receive injuries which cause trouble sooner or latter, to say nothing of the number of babies either killed in delivery or crippled. These figures should certainly give us food for thought and suggest, in part at least, the remedy which is to be found in prenatal care.

Preferably, it should be premarital care, but this is nearly always out of our jurisdiction. No woman should be permitted to go into labor blindly, and this can only be prevented by "prenatal care," which means a careful physical examination as soon as she engages her attendant, the earlier the better, including a thorough ex-

\* Read before the Jackson County Medical Society, Kansas City, May, 1917.

amination of the urine, an estimation of its daily output and also a blood-pressure reading. Her past history should be carefully taken, and any condition or event noted which may in any way influence her gestation or labor.

In a multipara with a history of a previous successful and normal labor an estimation of the pelvic diameters is of little practical value, but in a primipara this is very essential and may be made early or in the eighth month, at which time an estimation should be made as to the relative proportions between mother and child, for the question of a Cesarean section or an early induction of labor may come up for decision in the interest of mother or child or both.

Throughout the entire period of gestation the doctor should keep in close touch with the patient, making urinalyses and blood-pressure readings at regular intervals and the patient should be given careful instructions as to dress, diet, emunctories and sexual relations, with a list of danger signals and instructions to report at once any unusual condition.

A week or ten days before the expected date of labor a final examination should be made, to determine presentation and position of the child. Practically all information desired may be obtained by abdominal palpation, and a study of the fetal heart, though a vaginal examination with the gloved hand is permissible and may be an additional help.

The presentation and position being normal and the relation in size between mother and child being proper, there remains nothing to do other than to allow the woman to give birth to her child without meddlesome interference. Other conditions being found, the attendant at least knows with what he is dealing and may use his judgment in any attempt to correct existing conditions. The thing he does not and cannot know in primiparae and sometimes in multiparae is the power of labor, but he can give his patient the comforting assurance that everything else is normal, and if the power is what one could ordinarily expect, the birth will be a normal one.

Postnatal care, which is really prenatal care for the next child, is quite as essential to the welfare of the mother. Someone has said that the highest obstetric fee should be paid for cases delivered without injury to mother or child, and in a way there is some justice in the idea. A true obstetrician takes the greatest pride in those cases so delivered, but unfortunately the very best of care does not always give such a result, for certain conditions exist over which we have little or no control. A careful postnatal examination of our cases will show some degree of injury in practically every primiparous case, and quite often even in multiparae. The old 80 or 85 per cent. normal cases seems entirely too high.

Eight or twelve weeks after confinement every woman should present herself for a checking up examination, at which time arrangements should be made for a correction of any defects found in whatever way seems best. Indifference, even opposition, will be encountered to this plan, but this is a part of our educational duty.

Conditions being normal and labor once started, there will be no reason for interference unless the progress of labor ceases to be normal. This brings us to the question of vaginal examinations in labor. Experience is rapidly teaching us that the surest way to prevent postpartum infection is to keep absolutely out of the vagina. There is very little to be gained by a vaginal examination early in labor that cannot be determined by abdominal palpation together with a study of the fetal heart and a close observation of the patient's behavior; and this little may be nearly always determined by a rectal examination.

We are of course interested in knowing whether or not there is a prolapse of the cord after a rupture of the membranes, and this may necessitate a vaginal examination, though the advocates of the rectal touch in labor say that they can obtain all the desired information by this method; the degree of engagement of the head, the condition of the cervix, prolapsus funis, presentation and position. Up to date, the rectal touch has not been quite so satisfactory in my hands, but this may be due to lack of experience, a matter which time and continued effort will correct. However, it occurs to me that a source of danger might lie in the necessity of some vaginal manipulation arising immediately following a rectal examination. Might not our haste cause a serious break in our chain of surgical cleanliness?

In the Jackson County Medical Society we have an obstetric section composed of a very small number of men who take an active interest in the work, but we feel that we have done quite a little to raise the standard of obstetrics in Kansas City and not the least of this is the now almost universal use of sterile rubber gloves, white duck suits and gowns. In our hospital work we have a regular method of preparing our patients for delivery and the use of gloves, suits, caps and face masks is the rule, and it is exceedingly gratifying to see how willingly the men have fallen into line in this respect.

*Abnormal Cases.*—Breech, face and transverse cases are handled along pretty well settled lines, but there still is much diversity of opinion as to the proper method of dealing with occipito-posterior positions where there has been a failure in anterior rotation.

Anterior rotation by the forceps is advocated by some good obstetricians, but I feel that the chances of injury to both mother and child are



too great in such a procedure and that a preferable one is to push back the head and rotate by combined manipulation, one hand on the head, the other on the mother's abdomen, pushing the shoulder over to the opposite side. In spite of quite a marked degree of engagement of the head, even impaction, it is surprising how much can be done under complete anesthesia and elevation of the mother's hips. Rotation having been accomplished, the head may be drawn into the pelvis until renewed pains fix it, or it may be drawn down with forceps, which may then be removed and the case left to nature or the delivery completed as thought best. This procedure failing, the next best is a podalic version, which, though lessening the child's chances, gives the mother the best. Impaction of the head being too great for this correction, a sacrifice of the child by craniotomy seems preferable in the interest of the mother. Cesarean section offers little in these cases, for the previous attempts at delivery make infection almost certain after the section.

Much has been said about the use and abuse of the uterine curet. As much might be said about the use and abuse of the obstetric forceps.

In a case properly studied, presentation and position definitely known, a definite idea of relations between mother's pelvis and child's cephalic diameters ascertained, and the patient's powers carefully considered, I feel that nothing so conserves the interest of both mother and child as the judicious use of forceps properly applied and traction properly made. The reverse being the case, they are the most dangerous of all instruments.

Regarding Cesarean section in general, I wish to say that Rudolph Holmes' dictum, "once a Cesarean section, always a Cesarean section," is worthy of our most serious attention. If we will note the number of reports coming in of spontaneous uterine rupture in labors subsequent to Cesarean sections done in previous pregnancies we must admit that the wave of enthusiasm for this operation has gone too far. To subject a woman to Cesarean section after attempts at delivery by forceps or version, or even after repeated vaginal examination is inviting disaster, for these cases are practically always infected. If abdominal section is the only means of delivery in such a case, a Porro with extra-peritoneal treatment of the cervical stump is the safest procedure.

Certain cases of placenta praevia, abruptio placentae, and eclampsia may possibly offer an indication for section, but there should be an absence of previous manipulation and attempts at delivery which would prejudice the woman's chances for a normal puerperium. Under the same conditions I feel that a Cesarean section offers both mother and child a far better chance than does a high forceps operation on an un-

engaged head floating above the pelvic brim, though this is again really the choice between two evils.

As to pituitary extract, visiting doctors to our maternity department in Wesley Hospital often ask us about its use, and our reply is that it has its place in obstetrics, but that it is not used as a routine measure and if the doctor will not take the time and trouble to study his case, to know something of the relations in size between mother and child, to know the presentation and position of the child and the degree of cervical dilatation, he had far better forget that such a drug as pituitary extract exists.

I have used pituitrin in 3 minim doses, repeated three or four times during the first stage of labor in cases which seemed to need a gentle stimulation, and have found that it acted satisfactorily. I have also found that  $\frac{1}{3}$  to  $\frac{1}{2}$  c.c. doses are much better when we wish to give it in the second stage than the cubic centimeter doses given at first.

*The Conduct of the Third Stage of Labor.*—The point that is now engaging our serious attention is the method of handling a placenta, not adherent, for that is rather rare, but one that simply fails to come away in a reasonable time either spontaneously or by moderate pressure or even Credé. Under such a condition some excellent men are cutting the cord close, sterilizing it, tucking it into the vagina and waiting; all this being preferable to a manual delivery except in cases of hemorrhage.

To my knowledge we have never been told just how long to wait. We are assured that as long as the placenta remains completely attached there is no danger of hemorrhage, but we are not assured that a partial detachment with a possible fatal hemorrhage and no competent nurse on the job will not occur when we are miles away from our patient.

When so good an authority as Dr. DeLee tells us that it is his custom to explore the uterine cavity with his gloved hand after every operative delivery in order to detect a possible uterine rupture, we feel that the danger of infection through manual removal of the placenta is somewhat exaggerated. The crux of the matter lies entirely in our obstetric technic. If we have properly prepared our patients for delivery, if we are clean, if we will recleanse the parts, and if we will use a freshly sterilized pair of gloves and not the same pair with which we have massaged the uterus, we may remove a placenta manually with no more risk to a patient than that to which she would be subjected by leaving this organ in situ for an indefinite time. This we believe explains our position in the matter. During the puerperium, meddling midwifery is just as reprehensible as during labor.

A foul lochia without constitutional disturbance requires no attention other than ergot, elevation for better drainage and external pitcher douches. If accompanied by a rising temperature, an increasing pulse rate and a general feeling of uneasiness with a headache and foul taste in the mouth, more ergot is indicated with massage of the uterus and a Fowler position. Our trouble is saprophytic and will usually subside under the above treatment in a few days. If it does not do so in a reasonable time, or if conditions grow worse, a 1 per cent. hot lysol vaginal douche is given and repeated if necessary, though one is usually sufficient. Intrauterine douches are no longer in vogue.

The best way to treat eclampsia is to prevent it, and this takes us back to my remarks on prenatal care. Our records show that more cases run a blood pressure during pregnancy under the normal 120 mm. Hg than above it. A blood pressure above 135, without any other signs, should put us on our guard; and an increasing blood pressure with or without albuminuria and other preclampsic signs calls for prompt attention.

No improvement under the usual medical treatment occurring in a reasonable time, the termination of pregnancy is indicated regardless of the stage of gestation. The relation between hypothyroidism and eclampsia is attracting attention and the administration of thyroid extract has given good results in some cases.

Regarding placental abnormalities prior to labor, there is still no "watchful expectancy" treatment for placenta praevia, and the pregnancy should be terminated as soon as the diagnosis is made, otherwise the doctor should wash his hands of all responsibility, or better, he should retire from the case.

In the 60,000 cases in the New York Lying-In Hospital a premature separation of a normally placed placenta (abruptio placentae) occurred 164 times, or once in about 365 cases. Yet L. A. Wing, in the *American Journal of Obstetrics*, March, 1917, reports five cases in a period of thirteen months. Inasmuch as the condition is extremely dangerous, the child practically always, and the mother very frequently, dying, it behooves us to be on our guard. Sudden and continuous pain in the abdomen, shock and collapse, a hard board-like abdomen, cessation of fetal movement and often an enlarged uterus, with or without external bleeding, and most always a history of some injury, should at once remind us of this accident, though the diagnosis of uterine rupture may confuse us. The uterus should be emptied at once by the natural channel, if quickly possible, and if not, by Cesarean section.

Every doctor doing obstetrics without a hospital and surgeon quickly available should learn how to do a Cesarean section in an emergency.

While the operation is a spectacular affair it is yet a very simple one, the most important feature about it being the knowledge when, and more particularly when not, to do it.

In conclusion, I wish to say a few words regarding the relation of the patient to the doctor. There is no doctor who is not glad and willing to give value received for services rendered, but there are also very few doctors who will put forth continuously their best efforts when called on to give a \$50 service for a \$10 fee, and until this matter is properly adjusted obstetrics will always remain in a lower plane.

A properly attended gestation, a properly conducted labor and puerperium, with the restoration to the husband of a wife in practically as good condition as before, is worth just as much as any surgical operation, this being especially true in first baby cases. Therefore it is high time for men doing maternity work to get together and demand a fit compensation for their work. I have no desire to criticize the surgeon's fee, for we know he often gets nothing, not even thanks, but we do feel that obstetric fees should at least be on a par with other fees, service for service, and that the surest and quickest way to raise the standard of obstetrics is to raise the fee for the work.

801-4 Rialto Building.

#### FACTORS FOR SAFETY AND ULTIMATE RESULTS IN GOITER OPERATIONS\*

CARYL POTTER, M.D.  
ST. JOSEPH

The following report is based on twenty-four operated cases covering a period of three and one-half years and divided as follows: three simple cystic goiters, nine colloid goiters and twelve exophthalmic goiters. Not included in this report are two exophthalmic goiters which were submitted to tonsillectomies only, and no subsequent operation found necessary. The immediate mortality represents one case, a man 53 years of age, who had had an exophthalmic goiter for thirty years. He showed myocardiac insufficiency and was going from one crisis into another. At times he had an acute mania. The right superior thyroid was ligated under a local anesthetic after one and one-half weeks' palliative hospital treatment, but he died two days subsequent to the ligation. The remote mortality is represented by one patient who died five and one-half weeks after operation, three and one-half weeks after leaving the hospital.

We are led to believe that good results and keeping within the safety zone depend on: (1)

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.



The preliminary palliative treatment; (2) the development of the many-stage operation; (3) the application of local anesthesia and nitrous oxid-oxygen anesthesia, either singly or combined; (4) the preservation of the anatomy and blood supply of the parathyroid glands; (5) the careful manipulation of the recurrent laryngeal nerve and the tissues around it; (6) clean-cut dissections and complete hemostasis; (7) the accurate approximation of divided anatomical structures, and (8) prolonged post-operative diet and treatment.

In this particular branch of surgery as perhaps in no other, are attention to details and combined methods of treatment so valuable.

The preliminary treatment applies particularly to the exophthalmic cases, although in simple goiter with toxic symptoms it is just as important. Patients with hyperthyroidism suffering from a crisis are direct contraindications to immediate operation, and, if operated on at that time are very likely to die. Even those patients not suffering from a crisis are best put to bed in a dark, quiet hospital room on a milk diet or a milk, toast, egg and cereal diet. Removal from former surroundings is absolutely essential. In some cases it will be necessary to exclude all visitors and at best one visit daily for a fifteen minute period is sufficient. If the pulse exceeds 110 an ice cap is applied to the precordium and ice compresses to the neck continually or at intervals, depending on the comfort or discomfort to the patient. In a few cases, small doses of digitalis are sometimes beneficial. Quinin and urea hydrobromate and ergotin have been given a thorough trial, but I have never seen very much good derived from their use in moderately advanced or well-advanced cases. In a few very early cases they do retard the development of the symptoms. From my own experience I cannot say if this is permanent. I believe though that this particular form of therapy has a very limited field.

Very often it will be necessary to inject scopolamin gr.  $\frac{1}{200}$  and morphin gr.  $\frac{1}{8}$  at intervals of four to twelve hours. There is nothing that serves better than this combination to quiet nervous symptoms and the heart.

The nearer we can approach the "stolen goiter" methods practiced by Crile the nearer we have satisfied ourselves that we are giving our patients the chance for better immediate and ultimate results. There are none who respond better to suggestion, quietude and diet, that is, none who give better results from the practical application of anoci-association. There may be disagreements among many concerning the scientific basis for anoci-association, but practically it works. It teaches gentleness and care in preoperative and operative technic and

common sense, and results show that it is worth while.

Dividing major procedures into many stages is gaining ground with most conservative surgeons, and patients are beginning to feel that life-saving operations cannot always be done at one sitting. This demonstrates that surgeons are realizing the importance of overcoming constitutional symptoms first before attacking the direct causative factor, feeling that if these symptoms are corrected the rest will be less difficult. In other words, we often try to correct toxemia, whether it is septic, autotoxic, renal or hyperthyroid before removing the cause.

The many-stage goiter operation has lowered the mortality and improved the results to such an extent that a low mortality means dividing the operation into steps. In reference to our own cases we divide the stages into (1) preliminary tonsillectomies in selected cases; (2) boiling water injections; (3) ligation of one, two or three vessels at one or consecutive sittings; (4) partial lobectomy; (5) complete unilateral lobectomy; (6) complete unilateral lobectomy accompanied by removal of the isthmus and partial lobectomy of the opposite side.

The idea that focal infection in the tonsils plays an important part in the development of hyperthyroidism has been rapidly gaining ground until it has become an established fact. However, the extremist who is attributing all exophthalmic goiters to diseased tonsils is going too far. When the exophthalmic goiter has developed subsequent to attacks of tonsillitis and the tonsils are definitely diseased, a tonsillectomy will very often cause subsidence of the goiter symptoms and in these cases ought to be done before resorting to thyroidectomy. These cases should be carefully selected and even then the prognosis should be guarded and the patient informed of the possibility of a subsequent thyroidectomy.

In two cases, age 22 and 16, respectively, in which the hyperthyroidism had developed following attacks of tonsillitis, tonsillectomies have yielded good results, the pulse having dropped 30 to 40 beats per minute and the nervous, cardiac and digestive symptoms having almost entirely disappeared. In one the goiter has become very much reduced in size. The other had only a very small goiter in the beginning. From the present indications neither will need thyroidectomies. Patients in this category should be watched carefully for any return of symptoms, the heart being under continual observation.

Crile advocates the boiling water injections in extreme cases, and cases were seen in his clinic in which he thought the destruction of diseased thyroid tissue from the heat and the

resulting scar tissue had caused an amelioration of symptoms. One of our cases, a Jewish girl of 19, with marked exophthalmos but a small goiter, had had maniacal symptoms for one week, a pulse of 180 continually and convulsions which were choreiform in type. She had been in a dark room three weeks on rigid palliative treatment, but had grown worse. Boiling water injections were advised and 2 ounces injected into each lobe. This was repeated two days later, but she died in a few days in an acute delirium. This cannot be taken as a fair trial case, because it represented the most extreme form. Crile has injected some cases considered hopeless and claims that they have been carried to a stage where separate ligations could be done with subsequent lobectomies ending in partial or complete cures.

Cases formerly selected for primary ligation were those not having a crisis whose usual pulse rate was over 110. Now we are subjecting practically all exophthalmics to primary ligations, the number of vessels ligated depending on the degree of hyperthyroidism. Even ligations may result unfavorably, as was illustrated in one man, aged 53, who had had the goiter for thirty years, but when this is the case the ligation cannot usually be blamed. He died from cardiac failure two days following ligation of one superior thyroid artery under a local anesthetic. Many will show marked improvement after single or multiple ligations. However, the improvement is usually temporary, and the symptoms in the great majority will recur shortly and very often more severely unless subjected to thyroidectomy. It is best to allow some ligated patients to wait several months for the goiter operation. The main criticism to be offered is that many of us are too enthusiastic and do not allow a long enough interval between the ligations and the thyroidectomy. It is well to wait until the patient has shown the full limit of improvement after each preliminary procedure until proceeding with the next step. The sooner we learn this, the sooner will our mortality statistics improve. The man of 53, cited above, who died, would perhaps have been better off with boiling water injections before the preliminary ligation.

One should allow the symptoms to govern the amount of thyroid tissue removed. In simple goiters where the symptoms are local the bad effects of the goiter are best overcome by removing practically the whole goiter, leaving enough of the gland and posterior capsule, including the parathyroids, to continue the normal thyroid and parathyroid functions. Even with this precaution in large goiters one may disturb the blood supply or anatomy of the parathyroids to such an extent that the patient may develop symptoms of parathyroid insufficiency.

Local anesthesia with 1 per cent. novocain

and  $\frac{1}{30000}$  adrenalin chlorid has been very satisfactory for the entire work. In several cases we have used the local anesthetic alone. However, we have found that, although pain was eliminated, patients complained of great uneasiness, choking and a sensation of dragging when the lobes were delivered. Some became very nervous. This was not so marked in the small goiters, but in the larger ones where some force was needed to dislocate the lobes the patient complained considerably. Therefore, it is our practice now to administer nitrous oxid and oxygen analgesia when the delivery of the lobe is commenced and to continue it until the lobectomy is completed except for a short period when we are working in the neighborhood of the recurrent laryngeal nerves. After the goiter has been removed the patient is then allowed to leave the analgesic state and the operation finished under local anesthesia. The Mayos and Ochsner use ether; the latter, who keeps the patient in the half-sitting position, lays particular stress on the upright position and points out that it causes temporary cerebral anemia and hence requires a very small amount of ether. He also maintains that if the patient is completely anesthetized beforehand, the operation can be completed without further anesthetic. This probably gives good results in the hands of those using it. We know, however, that ether is a heart stimulant, a bronchial and renal irritant and very often causes intense nausea and vomiting. In goiter operations we particularly wish to avoid nausea and vomiting. In exophthalmics the stomach symptoms are often severe enough without adding ether to increase the difficulty.

We usually precede the operation one hour with scopolamin gr.  $\frac{1}{150}$ – $\frac{1}{200}$  and morphin sulph. gr.  $\frac{1}{8}$ . This is given at intervals preceding operation if the patient is restless.

Baldwin has recently written an article decrying the use of nitrous oxid. The success or failure in the use of nitrous oxid and oxygen depends altogether on the skill with which it is given. When given poorly it is the poorest anesthetic. When given with skill it is the ideal anesthetic for all operations outside the abdomen and cranial cavity and spinal cord.

When patients are cyanotic under nitrous oxid-oxygen, the anesthetic is administered poorly. Special training and skill are required of the anesthetist. The skin should remain pink or flushed throughout the entire administration and cyanosis is never seen in our cases. When patients are cyanotic during the whole administration, as is often observed, one can scarcely be blamed for decrying its use. Cases with pulmonary tuberculosis are also contraindications. Although nitrous oxid raises the blood-pressure we have never found that patients with arteriosclerosis were contraindica-



tions, provided scopolamin and morphin were used in sufficient quantities beforehand to quiet the patient and to cause the avoidance of violent straining, vomiting and coughing. Its advantage here far outweighs the irritation of the kidneys, stomach and bronchial tubes in arterosclerotics who are very often suffering from symptoms caused by disease in one of the above organs. The only contraindication then in goiter operations is the goiter complicated with pulmonary tuberculosis, which is rare, and if it comes to operation can usually be operated on under a local anesthetic.

Although one may leave the posterior capsule and parathyroids intact this does not always overcome the possibility of postoperative tetany. Interference with the blood supply or injury to the glandules in delivering and removing large lobes may result in the disastrous sequela which developed in one case, a man. The goiter was very large, extending to the level of the point of the chin and was very difficult to deliver. A generous amount of gland was left, including the parathyroids and posterior capsule bilaterally. Tentany developed the fourth day postoperative and continued with some remissions, but gradually increasing in severity, until he died in tetanic convulsions five and one-half weeks after operation. Calcium lactate failed to relieve him except temporarily. In this case the parathyroids were either injured or their blood supply so impaired that their function was diminished or destroyed. We are very careful now to leave the trunk of one inferior or superior vessel unligated and are not depending on accessory vessels to maintain the blood-supply. It hardly seemed possible that the amount of intact gland left in front of the sites of the parathyroids would permit the loss of parathyroid function to the point of parathyroid insufficiency but such was the result in this case. In several other cases much less tissue has been left anterior to the posterior capsule with no apparent ill effects.

One thing local anesthesia has taught us is the ease with which the recurrent laryngeal nerves can be traumatized. Very slight manipulation will cause spasmodic coughing or hoarseness and subsequent aphonia. It has been our custom when possible to allow the patient to come out of the analgesic stage while dissecting around the nerve and to converse with him. There has been much difference of opinion concerning the best method of handling the nerve. It has been our custom instead of transfixing the inferior thyroid vessels in the gland tissue, as advocated by Ochsner, to expose and tie them beyond the gland and not to manipulate the recurrent laryngeal. The fine threadlike line of the nerve can be seen as it passes over the inferior thyroid artery and it is usually

absolutely unnecessary to handle it. By observing this carefully we have saved the postoperative aphonia in all but three cases and in these the voice had returned within nine months.

There is no branch of surgery in which clean-cut dissections and complete hemostasis are more important than in neck surgery. A sharp knife carries the incision through the skin and platysma until the blue surface of the anterior and external jugular veins are exposed. These are clamped with small hemostats, cut between and the vessels ligated. The ligatures are left long with clamps on the end so that traction puts the entire platysma on the stretch. If we keep these vessels in view while separating the platysma from the muscles underneath no additional hemorrhage is encountered in raising the platysma flaps above and below because the veins hug the posterior wall of the platysma. The two lateral groups of muscles are separated by a median incision which extends to the capsule of the gland. Each lateral group of muscles consisting of sternohyoid, omohyoid and sternothyroid are divided high between small, Ochsner clamps not clamped tight enough to traumatize the muscle tissue. It is well to double tie each superior thyroid artery distal to the superior poles. The method of dealing with recurrent laryngeal nerves and parathyroids has already been described.

In our closure the fossae lateral to the trachea are lightly packed with gauze wicks and a tube placed in the center. The divided muscles are resutured in the usual manner. Most important from the standpoint of cosmetics is the superficial suturing. In order to avoid a spreading, disfiguring scar the platysma must be accurately and closely approximated. If the skin incision is then closed with a fine subcuticular catgut suture the appproximation will be represented by a small thread line scarcely perceptible.

In drainage when a single small tube is used we generally drain through the center of the collar incision. If, on account of the oozing, small tampons of gauze have been lightly packed into each fossa, these, together with the small tube in the center, make exit through a separate stab wound above the suprasternal notch. This is advocated by Kocher, but has the disadvantage of leaving an additional scar. In women particularly it is best to leave as small a neck scar as possible.

Probably as important as the removal of the goiter is the period of enforced rest and diet following the operation. Patients are advised to report once a month for heart examinations. The directions given by Ochsner are perhaps as exhaustive as any, and cover all goiters, particularly the exophthalmic. We give each patient a copy of these because they are more

likely to follow written than verbal instructions. They are quoted as follows:

1. Avoid all excitement or irritation like attending receptions, shopping, church work and politics. If anything happens to annoy you, put it off a week.
2. You should get an abundance of rest by going to bed early and taking a nap after luncheon.
3. You should have an abundance of fresh air at night, and consequently you should sleep with wide open windows or on a sleeping porch.
4. You should take nothing that irritates the nervous system, like tea, coffee, or alcohol. Of course you should not use tobacco in any form.
5. You should eat very little meat. If you are very fond of meat, take a little beef, mutton, or breast of chicken or fresh fish once or twice a week, or at most three times a week.
6. You should drink a great deal of milk or eat things that are prepared with milk, such as milk soup, milk toasts, etc. Also cream and buttermilk are particularly good for you.
7. You should avoid beef soup or beef tea or any kind of meat broth.
8. You should eat an abundance of cooked fruits and cooked vegetables, or very ripe raw fruits, or drink fruit juices prepared out of ripe fruits.
9. You may eat eggs, bread, butter, toast, rice cereals.
10. You should drink an abundance of good drinking water, or if this is not available you should boil your drinking water for twenty minutes, or drink distilled water.

In closing it might be emphasized that in handling goiter, particular stress be laid on combined methods of treatment and care; care in the suggestive psychology, care in preoperative treatment, care in dividing the operation into stages with sufficient interval between steps, care in dissection around the more delicate neck structures, care in anesthesia and care in the operation and after treatment. Rough radical treatment spells failure; gentleness success.

#### DISCUSSION

DR. C. E. HYNDMAN, St. Louis: Of all the disturbances of the thyroid gland with which we have to deal, I think without a doubt the exophthalmic goitre concerns us most. There are a number of theories to explain the etiology of exophthalmic goitre, extending along different lines, several observers maintaining that it is the result of an intestinal toxemia, while Crile maintains that it is the result of a disturbance of the motor system exerting its influence through the nervous system and leading to oversecretion on the part of the thyroid gland. Plumer, who perhaps has had more individual experience with thyroid glands than any others, maintains that it is a thyroid toxemia or toxicosis produced by a toxin. He states that exophthalmic goitre is a definite entity, and that it is always associated with a definite pathological condi-

tion in the thyroid gland. He also maintains that hyperplasia of the thyroid gland never exists without at some time producing oversecretion of the gland. In nontoxic, simple goitres, without a hyperplasia of the gland, we never have an exophthalmic condition resulting. It is, I think, pretty generally agreed that, whatever the etiology of exophthalmic goitre, in all cases we have definite hyperplasia of the gland tissue.

Now in considering this particular form of goitre, we look upon it as a chronic disease having usually a definite acute onset, running a more or less definite course with ameliorations and later exacerbations. We must also consider that even in simple goitres, cystic or of whatever nature, 30 per cent. of these goitres develop an exophthalmos later in life, usually in small, simple goitres at from ten to fourteen years later. In simple goitres we have, very frequently, spontaneous retrogression. Those must not be confounded with the physiologic changes which occur in adolescence, menstruation, pregnancy, etc. Those conditions it must be remembered we can bring about ourselves, so let us not produce an artificial Basedow's disease, or an iodism, as has been done.

We must necessarily consider the subject, as the doctor has said, from a medical and from a surgical standpoint. I think it was Kocher who said that if all goitres of whatever nature were removed within a very short time after their appearance they would all get well and the problem would be reduced to that of a simple herniotomy. But that cannot be. The general practitioner has a right, of course, to treat medically all cases of goitre in the early stages, until the nervous and cardiac symptoms appear; but it is his duty, if he fails at this time to arrest the progress of the disease, to refer the case to a surgeon during the curative stage.

As to surgical treatment, when a surgeon sees a patient, who has been referred by a general practitioner, the case is as a rule pretty well advanced in the disease. This calls for a special, individual study and slow progress, and each individual case must be considered by itself, as the response of each individual is different. It is a very good surgical rule in all cases not to give positive advice as to treatment until the patient has been observed for at least a week under absolute rest away from his usual surroundings. During this time, his general reaction, nervous condition, and condition of his kidneys and heart may be ascertained.

DR. ROLAND HILL, St. Louis: As regards the factors of safety in operations on these cases, it may be said that the removal of a simple cystic goitre, or a colloid goitre, for mechanical reasons, is an operation in which the element of danger is largely determined by the skill of the operator. On the other hand, where we are dealing with an exophthalmic goitre we have a condition in which the preliminary treatment is of the utmost importance to the safety of the individual.

Another point is the fact that in those cases which have gone on until the heart is ruined, although we may remove a section of the goitre and relieve the strain upon the heart, we will not get a perfectly normal heart as a result. Some degree of permanent damage remains.

In those cases that come to us in a hyperexcitable state it is absolutely necessary that this state should subside before any operation whatever is done. Rest in bed is essential in cases of crisis. I believe it is good practice to use preliminary injection of hot water before operation in some extreme cases. Incidentally in preliminary ligation the mortality is higher than it is at subsequent operation. That is, there is greater danger at the first than at the second operation. If you do a preliminary ligation and do another in ten days or two weeks, then wait three to four months before doing a thyroidectomy; in this time these patients, if they are going to be good operative risks,



will gain about 20 pounds. The mortality will depend, I think, very largely upon getting the patient in condition. Acidosis is an important factor. Extreme excitability is a factor that must be overcome before operative procedure is at all to be considered. If operation is done in one stage, two stages, or three or four stages, with the ligation of one vessel at a time, you will obtain very much lower mortality than where thyroidectomy is performed as the primary operation.

DR. FRANCIS REDER, St. Louis: I was pleased to hear Dr. Potter place so much stress upon the recurrent laryngeal nerve. I may say for those who have had the misfortune of injuring this important nerve, that it is an accident which can happen in the hands of the experienced and in the hands of the inexperienced just as well. The chances are about even. I do wish, however, to emphasize this, that the experienced surgeon hardly ever sees the recurrent laryngeal nerve. He does not care to see it. He usually knows how to stay out of this territory, and in his dissection he seldom gets lost.

DR. FRANK G. NIFONG, Columbia: I wish to accentuate one procedure that has been mentioned several times in speaking of preliminary work on the exophthalmic goitre. That is the injection of hot water. This is as you know an old procedure of Dr. Wyeth for venous angiomas and was taken up by Dr. Miles Porter, of Fort Wayne, who used it for the purpose of coagulating the colloid material in the goitre. In a limited experience I have found this work beautifully in cases that were totally inoperable without the preliminary treatment. I think, on the whole, it is of much more value than tying the thyroid because it really destroys a part of the gland. But the procedure must be carried out properly, and that means that although you say "hot water" it is boiling water that you use. Water which is merely hot will not coagulate the colloid material. You must have the proper syringe and with a little study of the technic and a proper protection of your hand you will be able to take up the water at boiling heat and shoot it into the gland. Let the filled syringe be immersed in the boiling water and take it out and use it instantly with hands protected by three pairs of gloves, rubber, cotton and rubber.

DR. WM. KERWIN, St. Louis: I rise to speak upon the medical side of this question. I feel that hyperthyroidism is an expression of disturbance in the function of the endocrine glands. We see a number of these cases because of their connection with disturbed menstruation. Conservatively treated, a great many of them improve, and in fact a great many more of them get well if conservatively treated, empirically if you will, than if operated. Therefore, I wish to urge you medical men to keep in mind that the day is coming when operation on exophthalmic goitre will be the exception rather than the rule.

DR. WM. T. COUGHLIN, St. Louis: Just touching briefly on this subject, I will say that I use nothing but local anesthesia, helped out if possible with scopolamin and morphin. There are certain goitre patients that do not bear scopolamin and morphin; their pulse rate is increased and they become wildly delirious. I think an operation attempted on a delirious patient is a good deal of an undertaking, and decidedly hazardous.

Another point I would like to mention is in regard to the injection of hot water. Cases of sudden death during the injection of boiling water are on record. So it is not an absolutely harmless procedure, and the friends of the patient should know that when it is undertaken sudden death is liable to occur. In fact, some of these cases are so bad that sudden death is impending without any surgical interference, and even the slightest surgical procedure is likely to cause the fatal termination. In injecting the hot water, care

should be taken that it does not go into the larger vessels of the gland. Even though the hot water coming in contact with the blood should cause coagulation, there may be a free passage for the clot to the heart with resulting heart failure from pulmonary embolism.

DR. H. A. LOWE, Springfield: I would like to say in response to Dr. Kerwin's statement, holding out this vision of medicinal oasis to us in the treatment of exophthalmic goitre, that if he will take the trouble to go to the clinic of Dr. Crile of Cleveland or to that of the Mayos of Rochester, and see these women come in who have been treated medically for years and years and have gradually gone down hill, and watch them taken through the preliminary steps and lastly the gland removed, he will find that they go out of the hospital cured. Then I believe he will change his mind in regard to the universal use of medicine in treatment of goitre.

DR. CARYL POTTER, St. Joseph, closing: Regarding the preliminary treatment, the toxic or the exophthalmic goitre more particularly needs this preliminary treatment. Even in the simple goitres without toxic symptoms where the patient is suffering from great pressure due to the time during which the goitre has compressed the neck vessels and traction, the heart becomes embarrassed and the patient is dyspneic, such patients are better off if they are held in the hospital for a week and a half to two weeks before any operative procedure is attempted.

Regarding those patients who enter the hospital in crisis, the surgeon has not usually seen more than twenty-five per cent. of them until they are in crisis. Why? Because the medical men hold on to them until there is a crisis and the family panic stricken. Let me emphasize that fully 65 to 75 per cent. of them are seen by the surgeon at a time when they have just finished a crisis or when they are in crisis, and crisis is an absolute contraindication to surgical intervention.

As to the heart condition, the surgeon very often sees them first when the heart has been so damaged by the tachycardia and the overstrain thrown on it by 140 beats a minute every sixty minutes in the hour and twenty-four hours in the day—lasting for years—that it is impossible to promise that the heart will return to normal after the removal of the goitre. Very often there is a permanent impairment of heart muscles. However, the removal of the goitre does prevent continued cardiac overstrain.

I cannot agree with Dr. Kerwin at all. He is a type of the extreme medical man who must be chastised severely because he is advocating a most extreme view of the situation; to say that all or most of these cases will recover spontaneously or after medical treatment is going beyond the limit.

Regarding the surgical aspect of the subject, I do not take the extreme surgical view. These patients ought to be given the benefit of the most careful medical care, but I do not want the medical man to tie the surgeon's hands too strictly behind him and say, "You shall not operate until the patient is in crisis." I would rather take the extreme surgical view than the extreme medical view, because statistics, boiled down, will show always a greater gain for good results from the surgical intervention in goitre than from medical treatment. The number of goitres being operated today is proof positive of the failure of medical treatment.

Referring to the use of scopolamin and morphin, there are a great many patients who have an idiosyncrasy to scopolamin and if these patients are treated beforehand they usually have one or two injections of scopolamin in their beds before they go to the operating room so that sufficient time and opportunity are given to observe whether they are going to show an idiosyncrasy to scopolamin.

# ABDOMINAL CESAREAN SECTION FOR ECLAMPSIA: REPORT OF TWO CASES\*

E. LEE DORSETT, M.D.  
ST. LOUIS

It is not my intention in presenting this report to go into the etiology of eclampsia or the non-operative treatment of the condition.

While the medical treatment has yielded excellent results, and the several methods of induction of labor and vaginal cesarean section have proven successful, there are a certain number of selected cases in which I think an abdominal cesarean section is indicated, it being the quickest and most favorable procedure to save both mother and child.

In those cases where we have to deal with a primipara, the fetus viable or at full term, the cervix long and high, the os rigid and the patient having eclamptic seizures, we are facing a condition that demands radical measures, that is, the most rapid and safest method of delivery of the child with the minimum danger to the mother. An operation that will fill these qualifications under the existing circumstances is the abdominal cesarean. It is certainly to be considered against a severe forcible dilatation of a rigid cervix with so-called "rapid" delivery of the fetus. We are familiar with those cases in which valuable time has been lost in dilating or attempting to dilate a rigid cervix when the patient is becoming weaker with each convulsion and there is a corresponding exhaustion of the child. Too little attention has been paid in the past to the life of the child; this is evident when we look over the statistics. The figures run from 40 per cent. to 53 per cent. In the so-called "Rotunda" treatment<sup>1</sup> used by Ross McPherson at the New York Lying-In Hospital, the maternal mortality showed a remarkably low per cent., that is, 8.6 per cent.; but the fetal mortality was 40 per cent.

DeLee states that this operation has a place in the treatment of eclampsia and believes that its field will grow larger in time.<sup>2</sup> B. M. Ricketts of Cincinnati has collected the contributions of a number of authors,<sup>3</sup> and from his deductions he advocates this operation. E. Gustave Zinke<sup>4</sup> is strongly opposed to the operation as a routine method, but says, "certainly in the presence of any condition (fetal or maternal) which makes the birth of the child

per via naturalis hazardous or impossible, abdominal or vaginal cesarean section or deep cervical incisions, each depending on the circumstances, are justifiable operations." Again the same author states in another paper<sup>5</sup> "cesarean section may become an elective procedure in cases of eclampsia during the period of viability or at term, when the os is very rigid or the cervix elongated or hard." In a paper by Miles Porter his conclusions are:<sup>6</sup> "In eclampsia occurring at or near term in the first pregnancy, cesarean section is the best method of delivery, except when the child is exceedingly small or the vagina and pelvis capacious, when a Dührssen operation might be given the preference." John F. Moran<sup>7</sup> reported fifty-three collected cases from 1901 to 1911 with a maternal mortality of 32.32 per cent. and a fetal mortality of 19.9 per cent. This, as he states is a marked improvement over the figures prior to 1901. Since this, 1911, there is a still greater improvement due to the proper selection of cases, better technic and better after treatment. In closing he says: "If it (cesarean section) is to have an established place in the treatment of eclampsia the indications for which they are urged must be met by prompt elective action, for to delay until the patient is in extremis and all other treatment has failed is to invite disaster." O. P. Hampstone of Brooklyn<sup>8</sup> reports 148 consecutive cases of cesarean section for all conditions; ten sections were for eclampsia; there was no maternal mortality, but two of the children (twins from the same mother) died. He says: "We feel that the early removal of the primary cause in eclampsia is both sane and logical, and prefer the abdominal route wherever the child is over eight months and no labor present." In the discussion of this paper A. B. Davis agrees with the author and S. M. Slemons of Yale reports six cases, with the loss of two mothers. His opinion is that primiparous women near term with an undilated cervix (with eclampsia) should be delivered by a cesarean.

There is an extreme variance in the statistics given for cesarean section for eclampsia as regards the maternal mortality. They run as low as 8.6 per cent. and as high as 50 per cent. A correct deduction therefore cannot be arrived at in these tables, especially as the cases are not separated and we have no way in judging how soon or how late in the eclamptic state the cases came to operation.

I do not wish to be placed on record as advocating cesarean section for every case of

\* Read before St. Louis Medical Society, April 14, 1917.  
1. McPherson, Ross: Bulletin of the Lying-In Hospital of the City of New York.

2. DeLee: Principles and Practice of Obstetrics, 1916, 2d edition.

3. Ricketts, B. M.: Transaction of the Western Surgical Association, 1913.

4. Zinke, E. Gustave: A brief analysis of Ninety Cases of Puerperal Eclampsia and a Critical Review of the Treatment of the Disease. Read before the 23rd annual meeting of the American Association of Obstetricians and Gynecologists, 1910.

5. Zinke, E. Gustave: The Limitations of Cesarean Section, *Am. Jour. Obst.*, lxxviii, No. 5, 1903.

6. Porter, Miles: Elective Cesarean Sections, *Jour. A. M. S.*, lxi, p. 937, Met., 1909.

7. Moran, John F.: Cesarean Section in Eclampsia, *Transaction of the Southern Surgical and Gynecological Assn.*, xxiv, 1911.

8. Hampstone, O. Paul: End Results of Cesarean Section, *New York Obst. Soc.*, Nov. 14, 1916.



eclampsia, but in the cases here presented it seemed to me to be the rational operation and the results bear me out. It is certainly a mistake to advocate any one operation which is based only on theoretical deductions obtained from statistical reports; these do not take into consideration the various phases of each individual case.

In connection with the operative treatment of this condition the postoperative care is of the utmost importance. The case now becomes laparotomy plus a severe toxemia and one that requires medical treatment carried out in a most careful and systematic manner, and it is only with the most careful nursing and all of the conveniences of a modern hospital that we can expect to obtain the best of results. The care of the child is in itself a most serious problem; it must be placed on artificial feeding and requires more careful attention than the ordinary new-born infant.

With these brief remarks I beg to submit the following two cases.

CASE 1.—First seen on May 20, 1916, and gave the following history: Married woman, age 33. Mother died of nephritis. Father and one brother living. Had typhoid 15 years ago, followed by arthritis in both ankles which resulted in a partial ankylosis of both joints. Five years ago had a stomach condition that was diagnosed as "gastric ulcer." Since that time has been "anemic" and had irregular attacks that were called "biliousness." Menstruation regular but has dysmenorrhea with headache and nausea and vomiting on the first day. The last menstrual period was February 25, 1916. Complained of a general feeling of weakness that is worse in the morning accompanied by nausea and occasional vomiting spells. Has lost about 15 pounds in the last two months. Has noticed that her gums bleed and that her hair is coming out. Physical examination revealed nothing, a rather rapid pulse and the picture of an individual suffering from type of anemia. The gynecological examination revealed an enlarged uterus corresponding to a three months gestation. Blood examination by Dr. George Ives showed the following: one plus Wassermann; leukocytic count, 14,600. Blood picture of a secondary anemia. A marked poikilocytosis and anisocytosis present. The urinalysis was negative. Systolic blood pressure, 128. A subsequent on July 22, revealed the fetal movements. Again examined on August 25, September 17, and last on November 6. Urinalysis and blood pressure negative at each examination.

The patient did nicely until the morning of November 17th, when she complained of headache and nausea and vomiting. Three days prior to this, it was afterward learned, the patient had some swelling of the face and hands but failed to mention it, as she considered it of no consequence, although she had been warned to be on the lookout for just these symptoms and to report them should they occur. Retired at 10 p. m., and was feeling somewhat better. At 10:30 had a violent convulsion and lapsed into a comatose state. I saw the woman one half hour after the first attack and found her in a semi-comatose state. A few minutes later had another convulsion. Case was then removed to the hospital where she had another attack on arriving.

Examination at the hospital revealed the following: Patient in a comatose state, stertorous breathing blood flaked mucus on lips. Respirations 28, pulse 120. Blood pressure, systolic 185, diastolic 120. Urine solidifies

upon boiling. Gynecological examination revealed a 38 weeks gestation, R. O. A. presentation and head not engaged. Fetal heart sounds distinct and strong, rate 138. No uterine contraction present. Cervix high and rigid, os not dilated, membranes unruptured. Case prepared for operation.

Operation: Preliminary to anesthesia,  $\frac{1}{6}$  grain morphin and  $\frac{1}{150}$  of atropin were given, followed by 1 c.c. of ergot. Under chloroform anesthesia the abdomen was opened by an incision (Davis method) above the umbilicus (following the abdominal incision 1 c.c. of pituitrin was given). The uterus was opened and the membranes ruptured, the fetus extracted by the feet and the placenta removed (placenta on the posterior wall). The child was partially asphyxiated but was revived under artificial respirations (weight 1990 gm.). The uterus contracted quickly and was closed in layers with No. 2 chromic catgut sutures. Abdomen closed in layers. Patient returned to bed with a pulse of 124, blood pressure 180-105. Hyperdermoclisis of 1 pt. of normal saline in the buttocks. Proctoclysis started. Stomach washed out and two ounces of a saturated solution of magnesium sulphate introduced into stomach.

Post-operative history: Following the operation the patient had only three convulsions. The first, two hours after returning to bed; the second four hours, and the third six hours after the operation. During the first twelve hours the patient was in alternating states of coma and delirium. During this period she received 10 ounces of magnesium sulphate per mouth and two hypodermics of  $\frac{1}{4}$  grain morphin and 15 mm. of veratrum veride. The latter reduced the pulse from 120 to 88 in one half hour. Patient was placed in hot packs but showed signs of collapse; the pulse running up to 150 and becoming very weak; 15 mm. hypodermatically of camphorated oil, relieved the shock. Oxygen was administered every half hour for fifteen minutes. At times the patient became violent but this was controlled with morphin, a restraining sheet and oxygen. At no time was there any vomiting following the operation. During the first twenty-four hours 33 ounces of urine were passed containing 0.75 per cent. of albumin with a few white blood cells and casts.

Second post-operative day: Temperature 99.6. Pulse 90. Blood pressure 160-90. Bowels moved three times, very copious watery evacuations. Sleeping the greater part of the time. Perspiring freely. Passed 82½ ounces of urine. Toward the later part of this period the patient became conscious.

Third post-operative day: Temperature 98.6. Pulse 90. Respirations 18. Blood pressure 160-100. Passed 97 ounces of urine. Examination of eye fundus was negative. Patient comfortable the greater part of the time except for an occasional "gas pain." Some facial edema still present.

Fourth post-operative day: Normal temperature, pulse and respiration. Blood pressure 158-86. Facial edema almost disappeared. Bowels moved freely. Urine excretion about normal.

Fifth post-operative day: Same conditions. Blood pressure 150-82.

Subsequent history: Was able to sit up in bed on the tenth day and left the hospital on the eighteenth. The child thrived nicely and at the present writing weighs 8¾ pounds. The mother is able to be about, but is still rather anemic and is under the care of an internist. The examination at this time is negative.

CASE 2.—Unmarried woman. Age 28 years. First seen on Aug. 30, 1916, at which time she gave the following history. Menstruated last on March 16, 1916. Fetal movements first noted on August 9. Family and personal history negative. Gynecological examination revealed a uterus corresponding to a five months gestation. Blood pressure and urinalysis negative.

Case reported at office at intervals of from three to five weeks for examination. Last seen at office on December 1.

On the afternoon of December 17 was called to see patient at her home where I found her complaining of vague pains over lower abdomen with slight and irregular uterine contractions. Patient was removed to the hospital where a vaginal examination revealed no dilatation of the os. Urinalysis and blood pressure were negative at this time. By midnight all pains had disappeared and the patient slept the remainder of the night. The case remained in the hospital the following day and was up and walking about and felt well. On the evening of the third day she began to have slight pains with weak uterine contractions and shortly afterwards the membranes ruptured and a considerable amount of amniotic fluid escaped. A vaginal examination revealed one finger dilatation of the os. Presentation left occipito-anterior, head not engaged. The pains continued to be weak and irregular and two hours after the beginning of the pains the patient complained of severe frontal headache accompanied by pain in the epigastrium, nausea and vomiting and very shortly afterwards had a violent eclamptic seizure which lasted about two minutes, following which the patient lapsed into coma. The blood pressure at this time was 180-120. Pulse 126. Respirations 28 and shallow. Urinalysis showed the presence of a large quantity of albumin. There were a few weak uterine contractions while the case was unconscious but no further dilatation.

Twenty-five minutes after the first convulsion the patient had another attack which was much more severe and lasted longer. The woman was then removed to the delivery room where an attempt was made to manually dilate the cervix but was abandoned because of its rigidity and the smallness of the vagina. After the second convulsion the patient became conscious (seemingly so) and was able to converse with those about her. The nature of her trouble was explained to her and she readily consented (in the absence of any members of her family) to undergo any procedures that we deemed necessary under the circumstances. (It is an interesting fact from a medico-legal standpoint that three days later when the woman was rational, she did not have the faintest recollection of this conversation.) While being prepared for the operation she had another attack and was comatose when she arrived at the operating room.

Operation: Preliminary hypodermics of  $\frac{1}{4}$  grain morphin,  $\frac{1}{150}$  atropin and 1 c.c. of ergot were given and 1 c.c. of pituitrin when the anesthetic was started. Under ether anesthesia the abdomen was opened by the high incision and the uterus incised and the child extracted by the feet. The placenta was attached posteriorly and was readily removed. The uterus contracted quickly and with only a small amount of bleeding and was closed in layers by No. 2 chromic gut. Abdomen closed in layers and the case returned to bed in good condition. The child showed only slight asphyxia and soon breathed regularly.

Post-operative history: One hour after operation patient had a convulsion which was followed by four others at intervals of 40, 55, 40 minutes, and 1 hour and 45 minutes respectively. Was given ten ounces of normal saline under skin on return to bed, three ounces of magnesium sulphate by mouth and saline per rectum. Fifteen mm. of veratrum (hypodermatically) which reduced the pulse from 126 to 84 within twenty-five minutes. During the first twenty-four hours patient was unconscious and at times very restless and occasionally violent. Was controlled by morphin and a restraining sheet over limbs and trunk. Hot packs were used at intervals and oxygen administered. These two methods seemed to quiet the patient nicely and she would often lapse into sleep following their use.

First post-operative day: Highest temperature 100. Lowest temperature 99. Highest respiration 28. Lowest respiration 22. Highest pulse 120. Lowest pulse 80. Amount of urine passed 13 ounces. Amount of fluids by mouth 23 ounces.

Second post-operative day: Highest temperature 101.6. Lowest temperature 99.4. Highest pulse 116. Lowest pulse 104. Blood pressure 156-90. Amount of fluids 123 ounces. Amount of urine 26½ ounces.

Third post-operative day: Highest temperature 100. Lowest temperature 98.6. Highest pulse 114. Lowest pulse 112. Blood pressure 172-90. Five bowel movements. Amount of fluids taken 82 ounces. Amount of urine 71 ounces.

Fourth post-operative day: Highest temperature 100.2. Highest pulse 100. Blood pressure 158-90. Amount of fluids 98 ounces. Amount of urine 71 ounces. Number of defecations 7.

Fifth post-operative day: Highest temperature 100.4. Highest pulse 110. Blood pressure 152-90. Amount of fluids 109 ounces. Amount of urine 36 ounces. Number of defecations 12.

Tenth post-operative day: Highest temperature 99.2. Highest pulse 94. Blood pressure 152-84. Amount of urine 114 ounces; no albumin. Patient sitting up in bed.

Fourteenth post-operative day: Temperature and pulse normal. Blood pressure 140-78. Out of bed.

Twentieth post-operative day: Normal temperature and pulse. Blood pressure 130-70. Discharged.

Subsequent history: Child placed on artificial feeding. Lost weight during first week but passed original weight on twelfth day.

Wall Building.

#### CHRONIC INFECTIVE ENDOCARDITIS: CLINICAL AND EXPERIMENTAL OBSERVATIONS—CASE RE- COVERY—TREATMENT

ABRAHAM SOPHIAN, M.D.

Research Laboratory, German Hospital

KANSAS CITY, MO.

Chronic infective, vegetative or malignant endocarditis, a disease with a typical clinical syndrome and definite pathological findings, is one of the more common diseases. Its prognosis is bad; diagnosis is usually not made until the disease has well advanced. And yet why should not this disease be recognized as early as typhoid or any of the other common bacteremias? The clinical picture is typical and complete; laboratory confirmation is simple.

I have selected a few cases to indicate the typical grouping of the symptoms, the laboratory findings, the special treatment indicated, and the selective action of the organism usually isolated, together with a description of the disease complete in every pathological detail reproduced in the rabbit and horse.

Case I.—Seen with Dr. Howard. A woman of 34 complained of weakness, pallor and shortness of breath on exertion for one year. She had rheumatism at different times in the past few years. In the last six weeks she grew much weaker and developed irregular fever with occasional chills; she complained of pain in the left iliac region, referred to the left upper anterior thigh. One month ago she delivered a healthy



child and since then has grown steadily worse, paler and weaker. At different periods she has suffered from pain referred to the left upper chest accompanied by bloody expectoration, pain over the heart with dyspnea; pain over the spleen accompanied by tenderness; pain referred to both kidneys.

*Discussion of History.*—There is an old history of rheumatism and a more recent history of a probable pelvic infection. The symptoms are referred to the heart with scattered symptoms which can mean only one thing—repeated infarctions in different organs. Lungs, spleen, kidney.

*Physical Examination.*—A severe anemia. The patient is very ill yet not as acutely ill as are patients suffering from the bacteremias running a more rapid course, as in typhoid, influenza, pneumonia, meningitis. She is slightly dyspneic. The heart is enlarged in all directions. There is a double mitral murmur and a pericarditic friction rub over the base. There is a rough murmur distinctly localized over the region of the right auricle. This murmur is of diagnostic significance. It may be found in these cases even when other murmurs are absent and is probably caused by the vegetations in the wall of the right auricle.

The other physical findings are all evidences of infarctions. (a) There are petechia in both lower eyelids, being seen in the conjunctival vessels, each having a white center. There is one petechial spot in the skin. (a) There is consolidation in the left interscapular region (infarctive pneumonia). (c) The spleen is enlarged and is palpable three fingers below the free border of the ribs, firm and tender; a friction rub can be heard over the spleen on respiration (splenic infarcts with perisplenitis); there is tenderness over both kidneys (infarctive kidneys); the liver is enlarged and tender (congested); there is a foul leucorrhea and tenderness in the left iliac region.

*Laboratory Findings.*—Urine: Many red blood cells, few leukocytes, no casts. Blood: Severe secondary anemia. Bile in blood serum.

*Cultural Examination.*—Blood culture: 10 c.c. of blood inoculated as follows:  $2\frac{1}{2}$  c.c. of blood each in 100 c.c. bottles containing plain and 0.2 per cent. glucose tissue bouillon;  $2\frac{1}{2}$  c.c. inoculated respectively in 10 c.c. tubes of plain and 0.2 per cent. glucose agar. After 18 hours the cultures each showed about 60 colonies per c.c., small, green, typical streptococcus viridans.

*Urine Culture:* Sterile catheterized specimen; urine centrifuged, sediment inoculated in 5 c.c. of bouillon which in turn was mixed with 10 c.c. of 2 per cent. tissue agar melted and at temperature of 38 degrees C. The result is a semi-solid medium very well adapted for the growth of the streptococcus viridans which grow as individual colonies, small, white, hanging free in the upper third of the medium. This was found in the sample of urine examined.

Cultural identification of the organism isolated from the blood and urine; a gram positive chain coccus, fermenting inulin; the bouillon culture was not dissolved by bile, the agar culture grew luxuriantly on serum glucose agar in which it caused a whitish cloud or precipitation of medium (phenomenon noted by Libman). No capsule was present.

*Résumé of the case.* A typical history of old chronic endocarditis of rheumatic origin. An acute history dating back to a probable focal infection in the pelvis; symptoms of anemia, sepsis, and infection in different organs. Laboratory demonstration of a severe bacteremia in the blood and the findings of the same bacterium in the urine.

This patient died suddenly of acute pulmonary embolus.

Animal experimentation indicating the selective action of the streptococcus viridans for the heart. Two young rabbits each weighing  $1\frac{1}{2}$  pounds were inoculated intravenously with the culture. In order not to allow any mutation of the organism, the original blood bouillon culture, made at the time of the blood culture, was used for inoculations which were begun with the first twenty-four-hour growth. First day 1 c.c. of this unchanged bouillon culture was inoculated and on successive three days the dose was increased to 3 and 4 c.c., the same bouillon culture being employed so that for the last injections a four days' growth was used. Rabbit 1 was killed at the end of seven days, being at the time apparently in good physical condition. The heart showed a vegetative endocarditis localized principally in the wall of the right ventricle and extending on to the tricuspid valve. There were a few petechia in the pericardium. The lungs showed a few petechia in the visceral pleura and there was a large infarctive pneumonia in the right upper lobe and a smaller infarction in the left lower lobe. Spleen and liver enlarged, kidneys were large, pale and showed parenchymatous degeneration. The right kidney, in addition, showed a large cortical white infarct with many petechia in the pelvis. Culture of the heart's blood and of the consolidated regions in the lungs yielded the streptococcus viridans.

*Discussion.* A typical reproduction of the condition seen in the human: a bacteremia; vegetative endocarditis, infarctions in different organs.

Rabbit 2 was killed two weeks after the last inoculation. The heart was removed and examined a few minutes after death. The right ventricle contained a large, reddish white clot, organized in the periphery and attached to the wall of the ventricle filling up a large part of the cavity. The lungs showed a number of petechia and infarctions; the kidneys, a severe parenchymatous nephritis.

*Observations in the horse.* Several years ago the writer attempted to produce an immune serum in the horse against strains of streptococci isolated from clinical cases of endocarditis. A horse, which was used for the work, suddenly died after being immunized for seven months by repeated subcutaneous injections with occasional intravenous injections of killed and live cultures. Postmortem showed multiple arthritis, the joints being distended with thin yellow pus from which was isolated the streptococcus viridans. The heart showed a vegetative endocarditis involving the right auricle, ventricle and tricuspid valves. The lungs showed an extensive infarctive pneumonia almost gangrenous involving the right lower lobe

from which the streptococcus viridans was isolated. The liver showed marked cloudy swelling; the spleen chronic congestion.

The laboratory experiments prove the selectivity of this organism for the heart.

Case II.—Seen with Dr. Lea Riley. Patient was a woman of 35 giving an old history of rheumatic endocarditis. The acute history dates back two months beginning with an attack of grippe complicated later by pneumonia. Fever continued; the patient grew more and more anemic and continued to complain of pain in the right chest, with occasional expectoration of blood. There were frequent attacks of pain over the precardium, with occasional pain referred to the spleen and kidney regions. The clinical and laboratory examinations gave findings identical with those described in the previous case. Toward the end of illness, this woman suddenly became delirious, vomited repeatedly and developed opisthotonos with general tonic spasm of the muscles of the extremities. Cerebral infarcts with multiple meningeal petechiae and possibly a streptococcic meningitis was diagnosed. Lumbar puncture yielded a faintly turbid fluid under very high pressure. Globulin was strongly positive. No increase of cellular elements, but smear showed a large number of gram positive chain cocci very much like the picture obtained in an actively growing bouillon culture. Cultural identification—streptococcus viridans.

Discussion of case. A typical history and clinical syndrome; the cerebral condition is unusual.

Case III.—Seen with Dr. J. W. Riley. Special treatment. A woman of 33 years, giving a history of illness over a period of two years of increasing pallor, weakness, dyspnea on exertion, with frequent severe attacks of abdominal pain accompanied by vomiting. During the last three months all of her symptoms have grown much worse. There is a history of probably congenital lues; a diagnosis of syphilis was made a few months previously and salvarsan administered with marked immediate improvement. Several weeks ago all of her symptoms reappeared. This time she definitely noted fever. Physical examination showed the typical clinical syndrome described in other cases. The heart murmur was localized over the right auricle; there were signs of infarctions in the spleen and kidneys, but no skin or mucous membrane petechiae. There was marked tenderness around the umbilicus. Laboratory findings: Streptococcus viridans in the blood and urine. Lutein reaction strongly positive. Wassermann reaction negative.

Discussion of case. There is a history of general abdominal pain. It is probably due to mesenteric infarctions which give symptoms simulating inflammation of any of the abdominal organs; symptoms of especial importance from a surgical standpoint.

The three cases cited indicate the history and findings found in practically all cases of infective endocarditis caused by the streptococcus viridans. The old endocarditis may be rheumatic or complicating other infectious diseases. The focus of infection lighting up the old condition and permitting the entry of the streptococcus viridans into the blood is most often

located in the upper air tract, tonsils, throat, nose, teeth. It may, however, be located elsewhere, as illustrated in case two of probable pelvic origin. The streptococcus viridans is the organism causative of most cases of chronic vegetative endocarditis, but any of the other pyogenic bacteria may also produce the condition, notably the influenza, staphylococcus, streptococcus hemolyticus, pneumococcus, gonococcus, meningococcus. Most of these organisms, however, produce the more acute type of the disease. Among the infarctive symptoms occasionally seen and of diagnostic importance may be noted the infarction in the finger ends simulating an ordinary phlegmon, described by Osler. Hemiplegia is common as are retinal petechia and hemorrhages.

The fever curve is very irregular, varying from the intermittent septic curve to the slight regular evening rise to 101 to 102 degrees. Periods of normal temperature for days at a time are not uncommon, but the bacteria can be isolated from the blood even during the afebrile stage.

Blood culture, while usually positive, is occasionally sterile, even in absolutely typical cases.

The disease runs a course of several months to a year or longer.

The prognosis is bad. Libman<sup>1</sup> called attention to the spontaneous disappearance of bacteria from the lesion in chronic infective endocarditis, and to the healing in part or entirely. Gilman Thompson<sup>2</sup> reported two cases of recovery under vaccine treatment.

What can we do for these unfortunates? At least we should make an early diagnosis so that active therapeutics can be applied with reasonable hope of success.

Of considerable importance is the relationship of focal infection to this disease. The infection becomes localized in the heart, yet the primary focus, if located, should be actively treated.

The treatment should be planned with an idea of destroying as many bacteria as possible in the patient's blood, at the same time effort being made to produce a high active immunity. Immune sera are indicated, but so far have not been successful. Commercial streptococcic sera have been of no avail, and immune sera prepared against the strains of streptococcus viridans isolated from these heart cases have also been of no help.

Libman and Ottenberg<sup>3</sup> reported the use of blood transfusion in four cases of endocarditis and noted considerable temporary improvement, especially in the anemia and general condition in two of the cases. One case had two trans-

1. Libman: Am. Jour. Med. Sc., September, 1912, cxliv, November, 1913; Tr. Assn. Am. Phys., 1912, xxvii.

2. Thompson, Gilman: Tr. Am. Assn. Am. Phys., 1909,

3. Libman and Ottenberg: Am. Jour. Med. Sc., July, 1915.



fusions, the others each had one. The writer suggests the advisability of repeated transfusion. Recently many observers have noted the favorable effects of normal blood transfusion in many infectious conditions. Normal healthy blood transfusion is certainly indicated in this disease, but if favorable results are to be expected, repeated transfusion should be made. In Cases 3 and 4 transfusions were done weekly.

A highly immune serum should also be used if possible. In view of the slow course of this disease it should be perfectly feasible and simple to produce an autogenous immune serum in a small animal, preferably a sheep, using the patient's own culture as antigen.

An attempt should be made to produce a high active immunity through the use of an autogenous vaccine. Thompson's two cases apparently recovered after the use of vaccine.

The treatment as planned then would be repeated blood transfusion, injection of sensitized vaccine intravenously, and the use of a highly immune specific serum produced by using the organism isolated from the patient as antigen.

#### SPECIAL TREATMENT OF TWO CASES

Case 3 previously referred to was treated by weekly transfusion of blood for a period of five weeks in quantities of 300 to 500 c.c. The direct method of transfusion was used. At the same time she was given weekly intravenous injection of salvarsan and subcutaneous injection of autogenous vaccine at five-day intervals. The patient rapidly improved. Two blood cultures taken after the third transfusion were sterile as was the urine culture. A severe attack of parenchymatous nephritis developed a few weeks after the last transfusion. This was considered to be possibly of arsenical origin. The patient made a prompt recovery. Unfortunately, she was lost sight of shortly after leaving the hospital, so that this case cannot be classed as a permanent cure.

Case IV.—A married woman of 35 gave a history of four month's duration of severe sepsis with marked emaciation, repeated severe chills with high temperature and evidence of repeated infarction in skin, mucous membranes, spleen and kidneys. Hb., 60 per cent.; R. B. C., 2,400,000; W. B. C., 12,000; Polynuclears, 75 per cent. Blood and urine culture yielded the streptococcus viridans. There was history of an old pelvic infection which apparently had cleared up. Roentgen-ray of all the teeth and inspection failed to show any trouble, but five months after recovery the patient had another series of dental films taken, this time showing a number of apical abscesses. Blood transfusion was immediately begun, the citrate indirect method being used. Four transfusions, each 300 c.c. of blood at weekly intervals, were performed. Immediately after the first transfusion the patient began to show very marked improvement, with cessation of chills, lowering of temperature and improvement of the anemia. Blood and urine cultures after

the fourth transfusion were sterile, temperature was normal and the patient apparently well. Six doses of autogenous vaccine were injected at three day intervals, subcutaneously, during the treatment. At this writing, fifteen months later, the patient feels absolutely well.

Clinical and laboratory studies have amply established the picture of chronic infective endocarditis and the selectivity of the organism for the heart. Diagnosis is relatively easy. In view of the grave prognosis it is particularly important to establish early diagnosis so that active therapeutic treatment may be instituted at the most favorable time.

Twenty-Third and Holmes Streets.

---

#### THE TREATMENT OF ACUTE RHEUMATIC FEVER\*

J. CURTIS LYTER, M.D.  
ST. LOUIS

In the light of modern clinical investigation, acute rheumatic fever is justly considered an acute infectious disease, the organisms gaining access to the circulating blood through some primary focus, either obvious or occult. There is unquestionably an existing positive chemotaxis between the bacteria responsible for this peculiar disease and certain of the body tissues, notably the synovial membranes of the joints, the endocardium, the pericardium and the pleura.

As there seems to be no definite embryological basis for the selectiveness of these organisms, a solution of this selection will quite probably await a further elaboration of cellular chemistry. In estimating the value of any therapeutic agent, it is necessary to consider most intimately the natural course of the affection, if left untreated, to which the agent is applied. Unless the therapeutic agent can be proved to influence favorably this natural clinical course it is valueless. It can then be readily appreciated that in acute rheumatic fever, characterized as it is by a most irregular clinical course, the valuation of any therapeutic measure is not only extremely difficult, but at times fraught with grave error.

Every clinician of experience is familiar with the fact that this affection might run its entire clinical course while involving only one joint or that it may and as a matter of fact does in many instances involve practically every joint. Again, it may remain definitely localized or manifest intense migratory tendencies. In its natural clinical course too, marked remissions and acute exacerbations are frequent as are re-

---

\* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

lapses and ultimately anatomical changes within the tissues involved. With such a multiplicity of clinical manifestations, it is very obvious that the correct interpretation of therapeutic results is not only intricate but at times absolutely misleading.

In this disease, probably more than in any other, the value of therapeutic measures should be estimated not only on the change wrought in the clinical picture, but on certain associated physiological changes not noted in the usual course of the disease. Especially among these physiological changes are sudden and extreme elevations of temperature and pulse and a rapid rise in the number of leukocytes in the circulating blood. If these changes occur and along with them there is great clinical improvement following the administration of some form of treatment, we can justly attribute the improvement to the treatment administered, for as a rule, rapid clinical improvement is not accompanied by an increase in temperature and leukocytes in any infectious disease.

It was at one time considered positive that recovery from any infectious disease depended on the establishment of a state of immunity, either partial or complete, ephemeral or continuous and more particularly in this affection, either local or general. A number of investigators, foremost among whom are Vaughan, Kraus, Ludke and Dunklin, have proved that the intravenous administration of a foreign proteid is followed immediately by a rapid rise in temperature and an increase in the number of polymorphonuclear leukocytes in the circulating blood. Along with this, Becht and Leuckhart<sup>1</sup> demonstrated that the hematopoietic tissues are the sources of practically all antibodies, and that a marked increase in the antibodies in the circulating blood follows the intravenous administration of proteids, in a general way indicating a selective stimulation of the hematopoietic system by nonspecific substances.

Following the long train of investigations there appeared in the literature many reports of various infections, mostly typhoid fever, rheumatic arthritis and gonorrheal arthritis, treated by the intravenous administration of some foreign proteid. The form of foreign proteid used depended not on any differences of opinion as to relative merits of the various foreign proteids available, but on the ease and accuracy with which certain types can be standardized. Typhoid vaccine has been popular because of its availability standardization. Miller and Lusk<sup>2</sup> reported 109 cases of various forms of rheumatic and gonorrheal arthritis treated by the daily intravenous administration of 1 c.c. of typhoid vaccine. In this series there were 45

cases diagnosed acute rheumatic fever of from two to forty-five days' duration. Previous to the institution of the foreign proteid treatment, 33 of these cases had been under active salicylate treatment, 29 of these 33 had noticed no improvement under salicylates, while 4 were only moderately improved. Under the foreign proteid treatment, 29 of the 45 recovered promptly, that is, the swelling, redness and pain disappeared from the joints within five days. Of those remaining, 8 showed marked improvement with only slight pain and stiffness remaining in the joints; 6 showed moderate improvement and 2 remained unimproved. Nine of this series had recurrences, and on being reinjected with the vaccine, were either cured or greatly improved. Miller concluded that the intravenous injection of typhoid vaccine has a very decided effect in many cases of arthritis and especially in the acute type.

In collaboration with the other members of the St. Louis University Medical staff at the St. Louis City Hospital composed of Drs. Neilson, Elmer, Lipsitz and Buddy, we have treated 16 cases of acute rheumatic fever by the administration of typhoid vaccine, the typhoid vaccine being used only as a standardized foreign proteid. These patients were given 1 c.c. of typhoid vaccine intravenously daily until a cure was effected. The temperature, pulse and respiration were carefully noted throughout the time of the treatment, the leukocytes counted before each injection and again four hours following each injection. Of the 16 cases, all considered themselves cured when they left the hospital. Three of the 16 have thus far had recurrences and returned to the hospital. Nine of the 16 required only three daily injections and were able to leave the hospital within a week following the last injection. Five of the 16 cases were cured after receiving five injections. One required seven injections and one eleven injections. The case requiring seven injections had suffered with severe attacks of acute rheumatic fever at intervals for twenty-five years. This patient received rest in bed and 200 gr. sodium salicylate daily for one week previous to the foreign proteid treatment. He was not even improved by the salicylate, but was cured and able to walk away from the hospital after seven injections of typhoid vaccine. The patient receiving eleven injections to produce a cure had received salicylates for four months previous to the injection of vaccine. During this four months he was mostly confined to bed. Most of the other patients had received from one to four days in bed previous to the institution of the injections because as is commonly known this measure in itself will frequently suffice to produce a cure in these cases. It was to obviate the possibility of this spontaneous cure being

1. *Am. Jour. Physiol.*, 1916, ix, 366.

2. *Jour. Am. Med. Assn.*, lxvi, No. 23; lxvii, No. 27.



attributed to the injection of vaccines that they were first rested.

Eleven of the 16 patients had a marked chill followed by a rise of temperature shortly after the first injection, and as a rule this chill and rise of temperature decreased with each succeeding injection. The temperature in these 11 cases would rise to from 102 to 107.6°. One case only had a rise to 107.6°, and this was a case of general arthritis of one week's duration complicated by acute endocarditis, pericarditis and pleurisy. She recovered fully after three injections, the endocarditis and pericarditis disappearing rapidly. Of the 5 cases revealing no chill, in no case did the temperature rise above 101. In no case of this group was there a rise in the leukocytes following the injection. Each one of these 5 cases received a daily injection for three days and were then able to leave the hospital. The leukocytic phenomenon in the remaining 11 cases varied greatly in the individual cases. The rise varied all the way from 3,000 per c.mm. to 30,000 c.mm. One extreme case had a rise from 15,000 before the injection to 40,000 four hours following the injection. The average case would reveal a rise to about 16,000.

Unquestionably the intravenous administration of a foreign proteid will in many cases of acute rheumatic fever, produce a chill, hyperpyrexia and leukocytosis. These phenomena are followed rapidly by a disappearance of the swelling, redness and pain from the joints, a reduction of the temperature to normal and the patient is able to leave the bed within a few days. Miller states that the complications of rheumatic fever as endocarditis and pericarditis are uninfluenced by the administration of the foreign proteid. While our experience with these complications in this series is very limited, we cannot subscribe unqualifiedly to Miller's statement. What physiological factors besides hyperpyrexia contribute toward controlling this disease following the injection of a foreign proteid, is today problematical. Jobling and Petersen conclude that it is because of the mobilization of ferments, especially the serum protease and usually of lipase or esterase. The serum protease is without effect on the bacteria themselves, but as the source of intoxication is due primarily to protein split products, the mobilization of the serum protease will be valuable in detoxicating these split products by hydrolysis. As a result of this hydrolysis the organism would rid itself for the time being of the toxic substances circulating at the time of the injection although the disease process itself and the infecting organism would continue in existence, capable of exciting a recurrence and further injury.

As the question stands to-day, it would seem to the writer that the administration of a

foreign proteid intravenously is justifiable in all cases of acute rheumatic fever in which some primary focus of infection, as apical abscesses, infected tonsils, gallbladder, appendix or genitourinary tract can be demonstrated and removed and those which prove refractory to general and salicylic treatment. Were it not for the very severe general reactions noted in most cases—which cannot be considered entirely devoid of danger—the foreign proteid administration would be the treatment of choice.

529 Frisco Building.

#### DISCUSSION

DR. W. W. DUKE, Kansas City: Dr. Lyter's very careful record of his studies on this subject tallies with the reports of other observers, such as Miller, Gay, etc. My own experience has been very much the same.

Vaccines are almost useless in the treatment of arthritis due to a focal infection if the focal infection is not surgically removed. The immunity produced by a vaccine injection apparently has little influence upon the primary focus itself unless drainage is perfect and unless the entire condition is made mechanically unfavorable for the lodgment of organisms. The reason for this apparently is that the increased immunity produced by a vaccine is of short duration and has little influence on organisms in pockets of infection, such as tonsil crypts, alveolar abscesses, etc., on which the defensive mechanisms of the blood cannot exert their full influence. If the focal infections are not attended to surgically the systematic effect of a vaccine will do little permanent good. Re-infection is almost sure to take place with recurrence of the systemic trouble.

Chronic arthritis does not yield so well under the influence of vaccines as acute arthritis. If change in the bony structures has taken place the infective agents are apparently lodged there in such way as to make it difficult for the defensive elements of the blood to exert their influence. Such arthritis is liable to persist for months or years even after every primary focus of infection has been removed and after the general immunity has been increased by the correct use of vaccines.

In acute arthritis, vaccines are worthy of trial, especially if primary foci have been attended to. It often shortens the duration of the disease from a period of weeks to a period of days and makes it possible to reduce the amount of salicylates, etc., which would otherwise be necessary to control pain.

DR. J. D. SEBA, Bland: I have been using vaccines for the last few years and the more I use them the better I like them. Especially have I used them in several cases of rheumatic fever, and they have never disappointed me. I have never used the typhoid fever vaccine for the purpose, though. I have used the vaccine especially prepared for rheumatism—that is, the "streptococcus rheumatica" as they call it. One case that I would like to report, if I am not too lengthy, was that of a young man who contracted rheumatic arthritis and within twenty-four hours was so bad that we had to turn him in bed with a sheet. That, it seemed to me, was an ideal case to try out without any of the salicylates or any of the other drugs commonly known as internal antirheumatic treatment. So I simply gave him something to clean out his alimentary tract and what you might call a placebo, not a single dose of drugs, none of the salicylates or anything like them. Under the vaccine treatment, that man was up and about in fourteen days' time and he has had no recurrence since.

In another case I was called in consultation by a

colleague to see a young woman in whom the condition had progressed pretty far. I had recommended sometime before that the girl's tonsils be removed. She had a heart lesion at this time. We commenced the use of the vaccine and although the heart lesion is still there she has gained in flesh and she rides on horseback and goes to school and apparently does not pay much attention to that little heart leak. Her general condition is decidedly improved and her tonsils have so reduced in size that at the present time they can hardly be seen.

DR. GEORGE H. HOXIE, Kansas City: I wish to support Dr. Lyter's observations with regard to the use of the typhoid vaccine in rheumatism. In the few cases that I have had the opportunity to try it the results have been very good. My observations, however, would lead me to feel that its special field is in those cases where the natural reaction on the part of the body is poor and where there is need of the stimulation of the hematopoietic organs. Those are the cases in which there is a small showing on the part of the leukocytes, a small showing on the part of febrile reaction. I believe it is in those cases that one gets the best results.

The second point I wished to bring out is that I find it rather good policy to give the vaccine in doses of one hundred million to five hundred million at intervals of two to three days; or, in other words, try to utilize the observation of the patient's reaction as the determinant how soon a second dose may be introduced. My reason for this is that in some cases the reaction has been delayed, not coming on in half an hour or within two hours as one ordinarily finds, but being delayed until the next day. One is somewhat reminded by this discussion of the non-specific vaccines of George Bernard Shaw's, "The Doctor's Dilemma," in which a very highly potent vaccine was given by the court physician t.i.d., p.c., to the inventor's great disgust.

DR. J. CURTIS LYTER, St. Louis, closing: I think it goes without saying that in all cases of acute arthritis, especially where there are frequent relapses, we should investigate our patients very closely for some focus of infection, tonsils or sinuses or what not.

There is one thing that I believe we should consider in using foreign proteins for any acute condition, rheumatic fever or whatever else you may select, and that is, that it is a procedure which is not absolutely devoid of danger. I do not believe that the treatment should be given indiscriminately. I do not believe that it should be given to a patient who is not under very close scrutiny, because in some of these cases we do see quite a severe reaction, with a pulse of 140 to 160, and for my part I would feel much more comfortable if an interne and a very capable nurse were on the job.

I cannot agree with Dr. Hoxie as to the class of patients who improve under this form of treatment. In our observations, and I think we have the support of Dr. Miller and of Jobling and Petersen in this statement, those patients improve most satisfactorily who have the highest temperature following injection and who have the most marked leukocytosis. This would only be logical because if a high temperature and leukocytosis mean anything they most probably mean a mobilization of these ferments the presence of which determines the patient's improvement.

I can hardly agree with him upon the delayed reaction. Our cases usually react promptly, so that we can almost time them, in from forty minutes to an hour and twenty minutes. Usually we get our reaction within an hour after administration, and I do not recall ever having a reaction delayed longer than an hour and twenty minutes. It has been our observation that if the reaction does not occur within the latter limit, the patient does not react at all; and where a patient does not react at all, the improvement is practically nil.

## PROTEIN INDIGESTION IN THE INFANT

JOHN ZAHORSKY, M.D.  
ST. LOUIS

### II

In the paper previously published emphasis was laid on the fact that clinical experience gives abundant proof that the indigestion of protein causes abnormal symptoms. If we approach the problem from the experimental side and study the metabolism of protein, the doctrine that the digestive disturbances so frequently arising in artificially fed infants are caused by the difficulty in digesting the heterologous protein of cow's milk, becomes exceedingly hazy. On the clinical side the practitioner examines the stool and finds that the color, odor and consistency of the stool of the infant artificially fed shows increased putrefaction or fermentation. On the chemical side the evidence that the protein of cow's milk is less digestible than human protein lacks the corroboration of the figures. "Neither qualitative nor quantitative experiments offer us any evidence for the contested doctrine that bovine casein is less thoroughly digested and absorbed than human casein" (Orgler<sup>1</sup>).

It is really remarkable how constant the quantity of nitrogen found in the feces remains even when the kind and quantity of food protein is varied. This is about 50 mg. for every gram of dried stool. This constancy of which Orgler makes so much is not so striking in the extensive analyses of Gamble<sup>2</sup> whose figures show a variation from 24 to 126. The table of analyses by Van Slyke and Courtney<sup>3</sup> gives variable figures from 35 to 110. One is compelled, therefore, to doubt somewhat the assertions of Prausnitz that all of the stool nitrogen arises from the intestinal secretions, but there can be no doubt that the intestine, whether a small or large percentage of protein is present in the food, makes a strong effort to absorb all of it and generally succeeds. The same rule holds with milk sugar; whether a large or small percentage is contained in the food, milk sugar is not found in the stool. And yet we know that the fermentation of a certain amount of sugar always takes place in the intestinal canal and at times so much that the chyle becomes irritating from the excess of acid in it and diarrhea results.

May not protein also act in the same way? Many not casein and lactalbumin partially

1. Orgler: *Ergebn. d. inn. Med.*, ii, p. 473.

2. Gamble: *Ann. Jour. Dis. Child.*, ix, p. 525.

3. Van Slyke: *Ibid.*, ix, p. 536.



digested be much slower in absorption and reach the lower end of the intestine and thus favor fermentative processes, but then be absorbed from the colon? In fermental diarrhea the nitrogen content of the stool is clearly increased (Talbot). May not considerable putrefaction of protein substance take place when even constipation is present and the fecal nitrogen be normal? Gamble (*loc. cit.*) attempted to measure these putrefactive changes by determining the amount of ammonia and urea in the stool, substances which are end-products of bacterial decomposition. He found that while the ammonia content is widely variable it tends to grow larger as the protein of the food is increased. The ammonia content increases with the frequency of the stool. His criticism of "the prevailing suspicion that constipation is an ally of putrefaction," is based on his examination which showed that the constipated stool contains the least ammonia and urea. Here again appears the weakness of the chemical studies of the stool. The end-products of bacterial putrefaction or the acids of fermentation may be absorbed in the colon, or the sigmoid, or the rectum, and not be found on chemical analysis.

Of considerable interest in this connection are the studies of Van Slyke (*loc. cit.*) in which a study of the amino-acid nitrogen in the stool was made. In general, the amino-acids are increased in diarrheal conditions, but no constant relationship exists between the clinical condition of the patient and the distribution of the fecal nitrogen among amino-acids, ammonia and protein. These studies are of great importance since they show that amino-acids, in some cases in considerable quantities, escape absorption, and these protein radicals are the most powerful agents to enhance bacterial activity. In fact, it is questionable whether unchanged protein can be used by the bacteria of fermentation.

Orgler maintains that the obvious putrefactive bodies in the stool arise from the intestinal secretions, but no reason is given why the foreign protein should be more quickly absorbed than the infant's own juices. Is it not probable that some amino-acids escape absorption, as Van Slyke's studies show, and these may become the source of an increasing intestinal bacterial growth. This growth may spread upward into the ileum and the aseptic part of the intestine is shortened and, consequently, an increased amount of protein substances reach the infected area.

For many years all efforts to find bovine

protein substances in the infant stool failed completely. The "injurious protein residue" could not be found and its existence was denied altogether. True, here and there, some signs of protein appeared. It was Talbot who proved conclusively that the beanlike masses in the infant stool consist of casein, and now pediatricists generally admit that these large, hard curds are composed of casein. That these masses covered with fat are perfectly harmless bodies, which neither irritate the mucous membrane nor serve as a food for bacteria must be conceded. On the other hand, when large casein clumps are found, smaller casein masses, no doubt, have also been carried down, partially digested and served as food for bacteria in the colon. The beanlike curds are indices of protein indigestion with all its diarrheal tendencies. All stools of infants fed on bovine milk contain bovine protein according to the exhaustive studies of Uffenheimer.<sup>4</sup> The injurious protein residue is, therefore, scientifically proven and it remains for the opponents of the protein theory to prove that these remnants are not detrimental to the infantile organism. Pure casein as such does not serve as a bacterial food, but lactalbumin and partially digested casein are readily attacked by bacteria and serve as initial provocatives of the symptoms of malnutrition and indigestion. The symptoms of indigestion, as a rule, precede the diarrhea. The infant is more restless, passes more gas, and the stools become lighter in color and more firm in consistency. A purgative often relieves these symptoms, at least temporarily, by removing the inoculating bacterial masses from the ileum or cecum.

When the abnormal flora reaches a certain exuberance, milk sugar or its products reach this part of the intestine and rapid fermentation with acid production occurs, peristalsis is increased and diarrhea with its attendant evils marks the final stage of the protein indigestion. There is no question that these symptoms may be brought about at once by giving a very large dose of sugar. In practice the fermental diarrhea is a gradual process induced by an excessive proliferation of bacteria due to the presence of a protein residue.

It seems to me then that chemical studies of the metabolism have by no means established that protein is easily assimilable and protein indigestion is unknown. A close study of recent analyses really points the other way.

A further corroboration that protein residue is harmful is furnished by cases of ileocolitis

4. Uffenheimer: München. med. Wchnschr., lxi, p. 2027.

in which large quantities of serum and mucus are poured into the intestine. Either protein alone (egg water, casein buttermilk) or carbohydrates alone (cereal decoctions, malt dextrine and milk sugar) may be given with comparative safety, but a combination of the two increases the diarrhea. Mixtures with low protein content are almost generally used, such as cereal decoctions. Milk in any form increases the diarrhea, although buttermilk and "eiweiss" milk are often serviceable.

4435 West Pine.

#### BENIGN AND MALIGNANT ACHYLIAS DIFFERENTIATED BY GASTRIC ALBUMIN

D. L. PENNEY, M.D.  
ST. LOUIS

The Wolff and Junghans<sup>1</sup> test for the estimation of the soluble albumin in the gastric contents after the usual Ewald breakfast, has proven to be a considerable aid in the diagnosis of gastric cancer in my series of 116 cases. The precipitating reagent used in this test is as follows:

Phosphotungstic acid, pure.....	3 c.c.
HCl, concentrated.....	10 c.c.
Alcohol, 96 per cent.....	200 c.c.
Water, distilled.....q. s. ad	2,000 c.c.

The test itself is carried out as follows: The filtrate of the gastric secretion is diluted with distilled water in six test tubes, 1/10, 1/20, 1/50, 1/100, 1/200, 1/400. One c.c. of the reagent is floated on the surface of the six dilutions. A pearly white ring at the junction of the gastric juice with the reagent signifies a positive result. Malignancy is only indicated when a positive reaction occurs in the dilutions of 1/200 and 1/400, suspiciously positive in dilutions of 1/100. Under normal conditions positive reactions occur in dilutions of 1/10, 1/20, 1/50.

Einstein,<sup>2</sup> Ralph, Katznelson,<sup>3</sup> Smithies,<sup>4</sup> Hawk and Bergheim,<sup>5</sup> and others have also demonstrated the value of this test. My cases were studied after Trallero's<sup>6</sup> fashion in which the stools and Roentgen-ray examinations were made. I also tried to associate the value of this

test with a positive glycytryptophan and lactic acid test.

The Wolff and Junghans test when performed in connection with other laboratory and clinical data is of much value especially in differentiating between the benign and malignant achylia, it proving to be (1) a more constant finding in the gastric extracts than the presence of lactic acid and glycytryptophan test; (2) than the presence of occult blood in the feces, and (3) the demonstration of the Oppler-Boas bacilli. The test is of no value in the presence of free HCl or blood in the gastric extracts, both producing atypical positive reactions, hence all cases containing free HCl or blood have been excluded from this series.

The action of the cancer cells which is markedly proteolytic is thought to be the explanation of an increase in albumin due to the presence of an enzyme, as large amounts of soluble albumin are present in the achylia of malignancy while very small amounts exist in the benign types, as the simple achylorhydria, achylia gastrica or achylia of pernicious anemia.

My experience with the Wolff and Junghans reaction extends over a series of 116 cases. A suspicious reaction was noted in dilutions of 1/100 and positive when the reaction was present in dilutions of 1/200 or 1/400.

Of the 116 cases, thirty-seven were benign achylia and seventy-nine cases of malignant achylia. Of the thirty-seven benign achylia, four, or 9.1 per cent., gave suspicious or positive reactions, while thirty-three, or 90.9 per cent., gave negative reactions. Of the seventy-nine cases of undoubted cancer of the stomach, seventy-three, or 92.5 per cent., gave suspicious or positive reactions, and six, or 7.5 per cent., gave negative results.

Free HCl was absent in all of these cases, in fifty (63.3 per cent.) lactic acid and the glycytryptophan test were positive. The glycytryptophan test was performed in only fifty-four out of the 116 cases, being abandoned because of its unreliability and inconstancy in connection with gastric malignancy; however, one factor was proved, that the glycytryptophan test was positive in every case in which lactic acid was present, whether the conditions were benign or malignant. The positive association of these two tests occurred in three positively known benign cases.

Recently Smithies reported 215 cases of gastric cancer in which the Wolff-Junghans test was performed, twenty-nine, or 13 per cent.,

1. Wolff and Junghans: Berlin Clinic, Wchnschr., May 29, 1911 and March 18, 1912, Medical Clinic, March 24, 1912.

2. Einstein: Med. Clin., March 10, 1913.

3. Katznelson: Russky Vrach, March 18, 1915.

4. Smithies: Am. Jour. Med. Sc., May, 1914.

5. Hawk and Bergheim: Jour. A. M. A., Sept. 12, 1914.

6. Trallero: Deutsch. Med. Clinic, Wchnschr., July 9, 1914.



were suspicious, and 141, or 65 per cent., were positive, while forty-five, or 21 per cent., were negative.

These reactions are interesting to compare with other findings. Of seventy-nine cases of undoubted gastric cancer, seventy-three gave positive reactions. HCl (free) was absent in all these cases. Oppler-Boas bacilli were seen in fifty-eight cases, the stools showed occult blood in sixty-eight cases, and lactic acid was present in sixty cases.

The test was made in four cases of cancer in other abdominal organs in which the stomach was not involved and in which there was absence of free HCl; of these the esophagus was affected in one instance, the liver in one, and the rectum in two instances. Of these, three gave negative reactions and one (esophagus) suspicious.

The positive reaction is not pathognomonic of gastric malignancy and should not be relied on alone to determine the existing condition, but as a laboratory test, chemically, I believe it to be of more value than any other test.

At times it is used to rescue the roentgenologist in differentiating between similar condi-

tions, that is, a luetic from beginning malignant filling defect in the stomach, in spite of the Wassermann reaction.

The conclusions arrived at agree with other authors: that in simple achylia the gastric secretion shows a moderate amount of soluble albumin during the entire period of digestion, the protein curve remaining low and conforming in a marked degree with the acid curve, while on the other hand in cancer the proteid curve diverges quickly from the acid curve, considerable amounts of albumin being usually present within three-fourths of an hour, the quantity being markedly increased to positive reaction with one to one and one-half hours.

After a careful study of my own cases, together with the report of others, and when taken in conjunction with other signs of the disease, I feel justified in concluding that the Wolff-Junghans test is of the greatest diagnostic help in detecting certain forms of gastric carcinoma, but this only when all traces of blood, free HCl, sputum, and retained food residue, can be eliminated.

316 Wall Building.

### THE HEALER IN WAR AND PEACE

The eighth annual session of the Clinical Congress of Surgeons has brought to Chicago the most brilliant representatives of a most extraordinary profession, extraordinary in that it is the sole profession engaged in picking its own pocket. These men will operate for nothing. It is literally true that any ragamuffin can command the services of the greatest surgeon in America. Moreover, the profession has abolished that highly lucrative institution, the confirmed invalid. Instead of jollyng him along for half a century and taking his money, the modern practitioner operates, cures him completely in an hour and a quarter, and turns him loose, never to see his face or his purse again.

A lot has been written, some of it true, about the amazing self-sacrifice of medical men in time of war, but it is nothing to the self-sacrifice of medical men in time of peace. Wars seldom happen. Peace is, so to speak, chronic. And what do we see? Men giving away discoveries and inventions that would make them multimillionaires. Men adopting short cuts to usefulness that mean a tremendous loss to whole classes of practitioners. Theirs was the first profession to propel itself by gasoline. The heavy burden this laid on young physicians was not merely financial. It brought them into a new and vitally perilous competition with established physicians. In former times, if you had pangs by night, you called in the nearest doctor, no matter how youthful. Now, if you have pangs in the night at Waukegan, you summon an old chap who used to treat those pangs in Fifty-Seventh Street. Presto—honk, honk—he arrives!

Perhaps the most striking sacrifice the modern Æsculapian has been caught at is the sacrifice of his beard. Gone is the Methuselah pose, so mysterious, so omniscient, so overawing. Smooth shaven, men-

tally as well as physically, the man will say, "Something ails you, old top, but hanged if I know what," and, with that by way of preamble, poke around to find out. Unlike his predecessors, he takes you into his confidence all along. He has nothing to conceal. When stumped, he admits it.

When successful, does he generally load you up with orders for things in bottles, things in boxes, things in barrels? That was the old way. It thrilled. What a wizard, to know so many drugs! Now, like as not he tells you to play golf, go to bed when good folks do, and quit worrying. It is a huge abdication. He puts the matter to you as if he were a fellow possessing only ordinary common sense. But his dream, when you get at it, is not only the abdication of wizardry, it is the abdication of his entire profession. Daily and hourly he strives to keep people from falling ill. Imagine architects struggling to abolish building! Imagine lawyers sitting up nights to abolish litigation! Imagine journalists toiling and perspiring to head off news! The only profession we know of that spends the bulk of its energy in efforts to pull itself up by the roots, so that the place thereof shall know it no more, is the medical profession.

Probably the world will keep on jeering at doctors and especially at surgeons. It is still believed that surgeons perform needless operations. It is still believed that surgeons operate for the immense pecuniary profit there is in it. But wait. When your own turn comes you will be amazed at the surgeon's reluctance to use the knife and still more amazed at the sliding scale of fees. No other profession has that sliding scale. You pay according to your means. Tell the surgeon your income. He will name a figure so far below what you expect that you will be tempted to exclaim, "If operations come as cheap as all that I'll have one every other Tuesday!"—*Chicago Tribune*.

# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

DECEMBER, 1917

### EDITORIALS

#### ST. LOUIS MUNICIPAL CLINICS FOR SYPHILIS

The following statement was handed to the St. Louis press by Dr. Max C. Starkloff, commissioner of health of the City of St. Louis, announcing the opening of a free clinic for syphilis, but with their usual temerity when it comes to the question of handling social diseases, the newspapers published only excerpts from it and failed to mention "syphilis." The announcement marks the beginning of a movement in preventing syphilis which will, we hope, become nation wide. The announcement follows:

The time has arrived when the health authorities must recognize the fearful ravages and inroads that syphilis is making on the general health of the community, and must take action to prevent the spread of the disease by checking it at its source in the infectious stages. As an economic proposition to a community and a municipality I know of nothing to compare to it if the source of the infection can be eliminated. Hereditary and acquired syphilis fills our hospitals, insane asylums and homes for defectives. Over 40 per cent of those in our insane asylums and homes for defectives under municipal control are there through the effects of syphilis. Therefore, as I said before, its economic and social importance is evident and the dire necessity to stop it at its source.

The reasons for the establishment of a municipal clinic for syphilis are:

1. To treat the disease as a preventive medicine disease, just as smallpox or diphtheria or any other infectious disease is treated.

2. Syphilis is of the greatest social and economic importance because it is the source of all cases of paresis, locomotor ataxia, from 20 to 60 per cent. of the heart diseases, all cases of aneurysm, a large percentage of the cases of nervous breakdown, arteriosclerosis, a certain percentage of Bright's disease, liver disease, anemia, facial deformities, etc.

3. Its source is in the infectious stage when it is conveyed by a personal or an indirect contact. This infectious state can be obliterated and stopped at once by the specific discovery of Ehrlich, salvarsan.

4. Two doses of this specific given at weekly intervals will render the large majority of infectious cases of syphilis noninfectious permanently, or for a long period, as it kills the cause of the disease, the germ (*Spirochaeta pallida*), in a few hours after the drug is injected into the body and therefore renders the lesions in the mouth or on the genitals, noninfectious.

5. Therefore it is very necessary that the public health authorities pay attention to the infectious cases and place this specific within the free and easy reach

of them. To do this I propose to establish municipal clinics where salvarsan is given to infected persons just as it is necessary to vaccinate to prevent smallpox, or to give antitoxin to those with diphtheria. This clinic will not be established for the cure and care of syphilis, but to prevent the spread of infection from those who have the disease.

6. When this procedure is continued over a period of time it is obvious that the number of cases of infection will be markedly lessened, and therefore the disease will be checked at its source.

7. Such a procedure in a few years will largely relieve the city of the cause of the dire conditions as the result of syphilis, or the maintenance of those who are incapacitated by this disease.

8. To put this within the reach of those infected the first clinic will be opened at the Municipal Courts Building under the control of the Commissioner of Health. This clinic will be in charge of Dr. M. C. Woodruff, Chief Diagnostician of the Health Department. This will entail no expense to the city except the purchase of salvarsan, as the rooms and the physicians are already available. Proper announcements will be made in all public places where it will be permissible when the clinic will be opened and its uses and hours. When the time comes we will ask the cooperation of the press to give this service proper publicity. All social workers and charitable organizations will also be informed.

For every dollar expended in this work the city and the community will gain tenfold.

The Director of Public Welfare, Hon. John Schmoll, is enthusiastic in the support of this proposition.

The Health Department will ask the cooperation of the most prominent syphilographers in this city to assist in this work.

St. Louis will be the first city in the United States to undertake this most important and necessary prophylactic health work.

As soon as the supply of salvarsan can be secured, which will be in a few days, this work will begin.

Realizing the far-reaching effects of syphilis and its economic and social relationship, it must be admitted that this is a master stroke in preventive medicine. Salvarsan to a certain degree is specific in the infectious stage of syphilis and to place its administration within easy reach of those infected will undoubtedly lessen the incidence of the disease.

We congratulate and commend Commissioner Starkloff for inaugurating this pioneer work in St. Louis. He has viewed the subject from its broadest standpoint and it seems to us has gone to the very core of the syphilis question in its relationship to public health.

#### KANSAS CITY'S PLIGHT

Kansas City is passing through an experience that reminds us of the days of Butlerized St. Louis when the political boss and his "Indians" dominated every municipal service, including the health department. Kansas City, however, harbors several political bosses. The following of one enjoys the euphonious sobriquet of the "goats" while the "rabbits" jump at the call of their leader. Both of these cliques belong to



the same party and each strives for independent control of the city offices when election time arrives. Another boss directs the forces of the opposition party. As a result of this keen competition the political pie counter does a rushing business and every ward heeler with a handful of votes must be served. All departments of the city government are more or less infested by political pests and the health department has had its share, but for some time this department has been the objective of a special drive by the politicians and Dr. W. H. Coon, the new health director, is the obstacle to their march upon the pie counter. A similar war was waged against Dr. Herman E. Pearse of Kansas City a few months ago when he patriotically served the city as health commissioner at the sacrifice of his personal interests, while the powers that be searched the country for a suitable officer and finally induced Dr. Coon to assume the task.

Trained in the school that has efficiency for its watchword, Dr. Coon made the most of the material at hand, but he struck a snag when he dismissed some employees with a "pull," and with the discharge of a steward at the General Hospital the signal was given for a general bombardment on the health director. All the small caliber fire of political maneuvering having failed to move the director, who is loyally supported by the health board, the big gun was brought up—the threat to cut off the pay roll of the department. This is usually an effective persuader in political tactics, but the director was not caught in the trap. "All right," he said; "go ahead. Stop the salaries. But remember when you do you close the department, including the General Hospital and the mortuary department. No ambulances will scurry through the streets to bring in the sick and wounded, no burial certificates will be issued. The dead bodies of your neglected babies will lie in your homes unburied and in the newspapers I will publish their names, and alongside of these names will appear the names of the wilful men who are responsible for this disgraceful condition."

Phew! Here was a new kind of animal to deal with, and for the moment the enemy was driven into his trench for a war council. Would the director do it? Never had anyone so brazenly defied the ring. But he might do it and then—

But wait. There was still another method of crushing this insolent foe. What about the legality of his appointment? The statute says the health commissioner must be a citizen of Kansas City of two years' residence. Dr. Coon was not a citizen, for he had been brought from a distant city and appointed health director without regard to his years of residence. Ah! There we have him. Mr. So and So will file a man-

damus suit against the health director and demand his removal because he has not complied with the requirements of the ordinance. The suit was filed and the trial court sustained the plea, but the health board appealed from the decision.

And then at last the people of Kansas City sat up and took notice. During all these maneuvers the newspapers gave full accounts of the attacks and counter-attacks, while the people stolidly watched the performance with the indifference usually observed in boss-ridden towns. But the suit to oust Dr. Coon was more than they could "stand for," as he had shown himself a capable administrator and a competent health officer. When thoroughly aroused the people are of course all-powerful, and nobody knows this better than the political boss, so the demand that the suit against Dr. Coon be withdrawn was promptly obeyed and the status quo was restored. The steward did not get his job back, and the health director proceeded serenely if not joyfully with his work. In passing, it may be remarked that the eminent citizen who brought the suit against Dr. Coon for holding his position illegally was himself arrested and fined a little later for selling liquor illegally in the little drug store he operated.

Another indictment against political bossism in Kansas City we regard as even more heinous than the attempt to corner the health department. We refer to the medical inspection of schoolchildren. Such inspection of a sort has been in vogue there from time to time, but its efficiency was disturbed by the same sort of vicious political meddling, and during the present school term inspection has been wholly abandoned. An ordinance was introduced in the council early this season appropriating money for medical inspection and referred to a committee where three "wilful" men have sat on it in complacent indifference while the people clamor and the newspapers plead for action. In this situation a public spirited citizen, who desires to remain in cognito, has agreed to pay the expenses of the inspection for three months, and the health director has accepted the offer.

Kansas City boasts of her huge bank clearings, her magnificent boulevards and her extensive stock yards, but she hangs her head in shame when you ask her how many little graves she digs for children dead through her indifference to enlightened measures of health protection. Any city that has an increase in mortality from communicable diseases over an extended period is today an object of scorn among intelligent municipalities, and Kansas City has had an increase of 25 per cent. in deaths from tuberculosis in the past nine years.

We do not believe the intelligent portion of the people of Kansas City will allow themselves

to be throttled in this manner very much longer. Kansas City's plight in this respect is graphically depicted by Dr. George B. Young, surgeon of the United State Public Health Service, in his report on a survey of the health conditions of the city, from which we quote:

"The fundamental reason for the conditions which have existed in the health department of Kansas City has been the failure to divorce any part of the departmental machinery from the control of partisan politics. The writer has had some opportunity to acquaint himself with conditions in municipal health departments as affected by partisan politics and regrets to say that they seem to have been worse in Kansas City than in any other place of which he has first hand knowledge."

The opportunity to cast off the yoke of political bossism stands yearningly before the people now while the new charter is being formulated. If they will awake to the full realization of the economic and advertising value of controlling disease among the people they will demand that the new charter shall provide for the complete separation of the health department from partisan politics. The *Kansas City Star* loses no opportunity of reminding the people that their condition of servitude is an unnecessary bondage, and we hope it will never stop doing this until the city has freed itself from such vicious, retrogressive influences. When St. Louis adopted its new charter and placed the health department and other city departments where the politicians could not "handle" them Butler's "Indians" disappeared. Let us hope for Kansas City that soon it will be "spürlos versenkt" for the "goats" and the "rabbits" and all other influences that prevent the adequate protection of the health of the people.

---

### JOINING THE MEDICAL RESERVE CORPS

Many physicians who have not yet applied for commissions in the Medical Reserve Corps are uncertain as to what will be expected of them when they accept their commissions. In order to present approximately correct data to our members the editor has obtained from the Surgeon-General some information that will be helpful.

The Surgeon-General believes that every available medical officer will be required as soon as our forces are more extensively engaged, and therefore he is anxious to have on file as many applications for commissions as it is possible to obtain. When the physician accepts his commission he is then subject to call for active duty, but it is the policy of the Surgeon-General's office to give the physician a reasonable length of time in which to adjust his civilian affairs before his departure.

In the beginning of the mobilization of the medical profession, physicians who had accepted commissions were disturbed because sometimes they were ordered to report for duty within twenty-four hours without previous notice, and at other times they were not called for several months. It therefore often happened that a physician who had not arranged his private affairs for early departure was compelled to abandon all his civilian duties and report for active service without having made any preparation whatsoever for absenting himself; while others, expecting an immediate call, had closed their homes, disposed of their practices and were in a state of what might be termed "suspended animation." All this has been changed. Members of the Medical Reserve Corps are now advised to continue their civilian duties until notified by the Surgeon-General to report for service, and at least fifteen days will be allowed them to make provision for their departure.

While to the civilian the methods pursued by the War Department for enlisting the services of the medical profession may be somewhat mysterious, we must nevertheless accept the explanation that the office of the Surgeon-General cannot at any one time be sure of the number of physicians it may need. To quote from the Surgeon-General's letter: "Today we might not have a single assignment to offer, and tomorrow we might be searching our files for available officers. Our action is governed solely and entirely by the exigencies of the service of which of course we have no control." In this connection we will remind our members that application for commissions is in the nature of preparedness, and the medical profession must maintain its honorable history of always being ready to serve humanity, and therefore it is much better to have an excess of men in commission than it would be to wait until disaster has arrived before offering our services.

Many physicians who have pursued special branches of practice are undecided about applying for a commission because they do not clearly discern how their services would be useful to the country. The Surgeon-General has made it very plain to us and to the people generally that the services of the physicians will be utilized in the field that is most valuable to the army and presents the largest opportunities for the physician to exercise his talent. Specialists, therefore, are being trained so that their knowledge will be most useful to the government in military medicine. Nevertheless, the Surgeon-General cannot promise that members of the medical corps will be given only such duty as might happen to be agreeable to the physician, for the government expects the physician to render his service wherever the need demands.



## UNIVERSAL MILITARY TRAINING

The movement to establish universal military training in this country is gaining force in every section, and a new bill will doubtless be introduced in congress at the December session to provide a system of military service. This question should have the intelligent study of the physicians of this country and their opinion voiced through the organized societies. We publish the resolutions adopted at the meeting of the state committees of the medical section of the Council of National Defense held at Chicago, October 23, and suggest that the matter be brought to the attention of the societies for action. The resolutions follow.

*WHEREAS*, The experience through which the United States is now passing should convince every thoughtful person of the necessity for the universal training of young men, not only for the national defense in case of need, but also to develop the nation's greatest asset—its young manhood—in physical strength, in mental alertness, and in respect for the obligations of citizenship essential in a democracy; Therefore be it

*Resolved*, By the State Committees of the Medical Section of the Council of National Defense that they strongly urge the adoption by our government at this time of a comprehensive plan of intensive universal military training of young men for a period of at least six months, on arriving at the age of 19 years; and that this body also support the movement to secure the introduction into public schools of adequate physical training and instruction;

*Resolved*, That the members of each State Committee immediately take active steps to insure public support for the subject of these resolutions through the newspapers, through public meetings and through the appointment of committees in each county; also that copies of these resolutions be forwarded to the senators and members of congress in their respective states, with a personal request that favorable action be taken at the coming session of congress on a measure following the principle of the Chamberlain Bill and to become operative as soon as the army cantonments are no longer required for the training of the forces in the present war;

*Resolved*, That each State Committee from time to time report to the Medical Section of the Council of National Defense as to action taken and progress secured in their several states.

## THE HONOR ROLL OF COUNTY SOCIETIES

Fifty county societies are on the Honor Roll for 1917. In 1915 thirty-seven societies had gained a position on the Honor Roll, and in 1916 thirty-eight had earned this distinction. The increase to fifty for 1917 is a very gratifying indication of the interest of societies in the welfare of the organization. We want this roll to grow yearly until all societies are included.

Some secretaries have inquired what disposition should be made of the state assessment of

members who have joined the Medical Reserve Corps and entered upon active service. This question was discussed by the executive committee at the November meeting and the conclusion reached that no action could be taken until the next meeting of the House of Delegates, because that is the only body with authority to waive any of the provisions of the constitution and by-laws. In the meantime we have heard many expressions from members and the opinion generally obtains that the members of the corps would be better satisfied to pay their dues than accept any gratuity from the county or the state societies. There may be some delay in receiving dues from absent members, but we believe all of them will respond as soon as they can do so. One county society has paid the state assessment for its members in active service out of the county society treasury, which is a graceful compliment that other county societies might be willing to extend.

We desire to learn the address of all absent members so we can send the *JOURNAL* to them and will change the addresses as often as the doctor is transferred from one point to another. We will be grateful, therefore, if the county secretaries and other members will notify us of the addresses of their friends in the service. A postcard will be sufficient notification.

## OSTEOPATHS NOT COMMISSIONED IN THE MEDICAL RESERVE CORPS

The following item from the *Journal of Osteopathy* will interest our members:

"Osteopaths have been refused commissions in the Medical Service of the United States Army, despite the assurance published a month ago that they would be allowed to take the same examination as those having an M. D. degree. When the actual examination papers of osteopathic physicians came into Washington, with applications for commissions, the papers were returned, not accepted. The judge advocate general had ruled that the M. D. degree was essential."

Several months ago when rumors were current that the osteopaths had been given commissions in the Medical Reserve Corps on the same basis as that established for physicians we received word from the surgeon-general of the army that the rumors were "absolutely unfounded." Notwithstanding this fact the osteopaths asserted that we had made an error, and declared that osteopaths were being recognized.

Now let us hear from the chiropractors.

## NEWS NOTES

HAVE you signed the food pledge?

THE State Board of Health has moved into its quarters in the new capitol.

NO more joy rides for Englishmen. Gasoline for motor cars has been limited strictly to trips on necessary business.

WHISKEY and bad women are ever the foes of good manhood. In war time they become enemy aliens and must be interned.

DR. ROBERT F. HYLAND of St. Louis suffered severe injuries on November 15, when his automobile collided with a motor truck.

THE interest on the national debt is eating up the Turkish revenue, says a news dispatch. Wouldn't it be fine if something would eat up the Turks?

DR. GUY L. NOYES, dean of the Medical School, University of Missouri, has been relieved from military duty at Camp Funston and returned to Columbia to continue his school duties.

AN epidemic of spinal meningitis at Camp Funston, Kan., caused considerable alarm among the troops for several weeks last month, but the army surgeons soon had the disease under control.

AN auxiliary to the American Red Cross has been formed at Charleston among the school-children. Their supplies for carrying on the work are purchased with the small fee assessed each member.

LIEUT. A. L. EVANS of Bonne Terre, who was a member of the Medical Officers Reserve Corps stationed at the training camp at Ft. Oglethorpe, Ga., has been honorably discharged and returned to his home.

DR. W. W. DUKE of Kansas City was a guest at a joint meeting of the St. Louis Medical Society and the St. Louis Dental Society, November 3, and delivered an address on "Dental Sepsis as a Focal Infection."

DR. J. CARL DRAKE, formerly of St. Louis, now lieutenant in the 138th Infantry (5th Missouri) has been confined to the base hospital, Fort Sill, Okla., for several weeks. He was operated on November 1 and will soon be able to resume work in camp.

DR. C. A. MCGUIRE of Kansas City, now on duty at a base hospital in France, has recovered from the injuries he suffered at the time Dr. Fitzsimmons was killed by a bomb dropped from a German aeroplane.

AT a meeting of the Wright County Medical Society Nov. 2, 1917, a motion carried that the society should draw a warrant upon its treasury for the state assessment of all its members called to active service in the war.

DR. E. H. TROWBRIDGE, physician at the tuberculosis hospital and municipal farm of Kansas City, has been elected secretary of the hospital and health board of Kansas City, and will be in charge of the medical inspection of the schoolchildren.

DR. F. M. BARNES, St. Louis; Dr. M. P. Overholser, Harrisonville; Dr. Walter McNabb Miller, Columbia, and Dr. H. C. Shuttee, West Plains, were appointed by Governor Gardner as delegates to the Social Welfare Conference, held at Joplin, November 18-20.

THE statement in a recent issue that Dr. W. A. Clark of Jefferson City had been appointed physician to the penitentiary was erroneous. Dr. Clark is only acting as prison physician at the request of the board until the board can decide upon a permanent appointment.

THE public schools of Cape Girardeau are being seriously handicapped by epidemics of smallpox, diphtheria, scarlet fever and whooping cough. A nurse from the St. Louis Hygienic Department has been enlisted into service, but the local medical profession has been able to control the situation.

RECENTLY an outbreak of measles at Camp Pike, Little Rock, Ark., sent many of the soldiers to the hospital. Most of the men in this camp are from rural districts who are more susceptible to this disease than are men from cities, because the latter usually are immune through attacks during childhood.

VEGETABLE beefsteak is announced by a Crane (Mo.) physician, who has been devoting considerable of his time to research concerning the best way to attack the common enemy, H. C. L. The doctor says the plant surpasses real beefsteak in caloric value, and that a small garden plot will raise enough to supply a family for a year. "Eureka! Just in time," exclaimed Editor Carney of the *Chronicle*, crossing the street so as not to go home by way of the meat market. —Kansas City *Star*.



THE results of the examination for license to practice in Missouri, held by the State Board of Health in September, show four failures out of twenty applicants. Licenses were issued to the sixteen successful applicants and to ten others who applied for license on reciprocity. The next examination will be held in St. Louis, December 17, 18 and 19.

VICE in the form of 23,000 women, bootleggers and gamblers, organized and controlled by a syndicate, it is said, threatens the morals and health of the soldiers at Camp Lewis near Seattle, Wash. Maj.-Gen. Henry A. Greene, commander of the army at the camp, declares he will quarantine Camp Lewis against Seattle and Tacoma if the ring is not broken up.

IN the monthly letter detailing the Council's consideration of products for the month of October, the product Arsenobenzol (Dermatological Research Laboratories, Philadelphia Polyclinic) was listed as being sold by the "General Laboratories." This was an error; the product is sold not by the "General Laboratories," but by the "General Drug Company, New York." It is regretted that this error was made.

WHILE medical inspection of the school children of Kansas City has been suspended by the municipal authorities for lack of funds, a public spirited citizen, who desires to remain incognito, has agreed to pay the expenses of the work for three months. Five physicians, five dentists and ten nurses will form the staff of inspectors and begin work at once under the supervision of the hospital and health board.

THE Rev. Dr. Shailer Mathews says the exemption from the draft of clergymen and theological students is either "an insult or a challenge." It is an insult, he declares, if it implies that ministers are not as ready to serve their country as any other class of citizens or that they are too effeminate to make good soldiers. It is a challenge if their work is so important that it cannot be abridged even in war times.

AT a recent meeting of the Boone County Medical Society, to which the members of Audrain, Callaway, Cole, Cooper, Howard and Randolph county medical societies had been invited, resolutions were adopted in which were set forth the advantages of free laboratory work being done by the state university. It was proposed that the people of Missouri be made acquainted with the beneficial results of such a procedure, and that the next legislature be urgently requested to make the necessary appropriation for rendering the resolution effective.

CHAIN letter schemes to raise money are not sanctioned by the American Red Cross, nor has it authorized anyone to use the name of the Red Cross in such schemes. The sincerity of persons raising money by these means is open to doubt, and there is no assurance that the sums contributed will reach the Red Cross. Make your donations to the Red Cross through the properly constituted channels only and avoid the chain letter scheme.

ONE of the most attractive clinics during the recent meeting of the Medical Association of the Southwest was given by the Obstetric Division of the Kansas City General Hospital, under direction of Dr. George C. Mosher, chief, and Dr. Buford G. Hamilton, junior obstetrician, who are at present on duty.

The demonstrations included the McDonald and Spigelberg measurements for calculating the length of the fetus in utero; the technic of induction of labor and the conservative treatment of neglected abortion; also ward walks and exhibition of patients waiting and puerperal.

THE regular meeting of the Medical Society of the City Hospital Alumni, St. Louis, was held Thursday, November 8, at 8:30 p. m. Dr. George M. Koenig read a paper on "Deceptive Abdominal Symptoms, Arising in Acute Gonorrheal Epididymitis," with presentation of case. Dr. Dahms reported a case of ruptured ectopic pregnancy, with presentation of case. The future welfare of the Alumni Association will be a special order of business at the next regular meeting which will be held at the St. Louis Medical Society Auditorium, Dec. 6, 1917.

THE first class of students from the Officers' Medical Reserve Corps ordered to take the course in oral and plastic surgery in the special school established at Washington University Medical School by the Surgeon-General of the Army has completed its course, the members, numbering thirty-seven, returning to their respective posts. The second contingent has reported for the course, which began on November 5. There are thirty-five men in this class, of which twenty-seven are surgeons and eight are dentists. This course differs from the first in that it offers, in addition to oral and plastic surgery, surgery of the cranium and brain. Dr. Robert T. Frank of New York is acting as military director.

KANSAS CITY must clean up vice conditions at once or be quarantined against army camps, is the edict of United States government officials. Mr. Henry F. Bart, in charge of the law enforcement department of the War Department, recently visited Kansas City and found condi-

tions so demoralizing for the soldiers who visit the city from nearby camps that he ordered the immediate closing of all immoral houses, prohibiting women from soliciting on the street, and keeping all liquor away from soldiers. While the saloons have generally obeyed the law to refuse liquor to soldiers, some rooming houses and hotels have permitted drinks to be served to soldiers in private rooms. The police department and the prosecuting attorney have promised to wipe out these vicious influences.

FOR failure to report the birth of a child a St. Louis doctor who had knowledge of the birth, was arrested and fined \$5; the midwife who delivered the child was fined \$10, and the baby is stone blind. After birth the baby developed inflamed eyes which the midwife treated for nine days and then called the physician who was unable to save the eyes, but failed to report the birth. Commenting upon this neglect, the *St. Louis Post Dispatch* remarks editorially: "In the light of these facts, we venture the opinion that St. Louis should make an effort to keep as perfect a record of new babies as it does of new corpses."

COL. T. H. GOODWIN of the British Army Medical Service, and Col. C. U. Dercle of the French Army Medical Service, were guests of the Medical Section of the State Committee on National Defense at St. Louis, November 16. They delivered addresses before the Chamber of Commerce and the City Club at a luncheon, were entertained at a dinner at 6 o'clock at the St. Louis Club, and at 8 o'clock addressed a large audience in the Central High School. Colonel Dercle accepted an invitation to address the St. Louis Medical Society on November 17, and gave a most interesting account, illustrated by numerous motion pictures, of the medical service in the French Army.

DURING October the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

General Laboratories: Arsenobenzol (Dermatological Research Laboratories, Philadelphia Polyclinic).

Jno. T. Milliken & Co.: Acetylsalicylic Acid Capsules-Milliken; Acetylsalicylic Acid Tablets-Milliken.

Monsanto Chemical Works: Acetylsalicylic Acid (Aspirin), Monsanto.

Schering and Glatz: Atophan, S. & G.

E. R. Squibb and Sons: Silver Protein-Squibb.

Standard Oil Company of Ind.: Stanolind Surgical Wax.

DR. ROBERT E. SCHLUETER, president of our association, has joined the Medical Officers Reserve Corps and received his commission with the rank of captain. Others officers of the association who have accepted commissions are: Dr. J. P. Henderson, first vice-president, Kansas City, captain; Dr. H. A. Lowe, second vice-president, Springfield, first lieutenant; Councilors: Dr. O. C. Gebhart, St. Joseph, major; Dr. A. R. McComas, Sturgeon, captain; Dr. A. C. Crank, Canton, first lieutenant; Dr. G. W. Hawkins, Salisbury, first lieutenant; Dr. H. S. Crawford, Harrisonville, first lieutenant; Dr. A. H. Hamel, St. Louis, captain; Dr. J. H. Timberman, Marston, first lieutenant; Dr. W. H. Breuer, St. James, first lieutenant.

WITHIN nine months the *American Review of Tuberculosis* has made for itself a unique place in medical circles throughout the United States and in almost all parts of the world. Few specialized journals have received a more cordial welcome than this one has, as evidenced by its rapidly increasing subscription list. The large number of medical men who are interested in the treatment and prevention of tuberculosis gives the *Review* an unusually extensive field. The backing of the National Association for the Study and Prevention of Tuberculosis also makes it possible for the publishers to furnish the *Review* at so moderate a price as \$3, which, to those who know anything about the cost of production of such publications, will readily appear as less than the cost of production. Dr. B. S. Veeder of St. Louis is one of the editorial staff which is directed by Dr. Edward R. Baldwin of Saranac Lake. We are glad to recommend the *American Review of Tuberculosis* to our reads and urge them to add it to their subscription lists. Subscriptions should be sent to the New York office at 105 East 22nd Street, New York City.

PHYSICIANS visiting Kansas City are cordially invited to the meeting of the Medical and Surgical Club of Kansas City, Mo., which will be held at the General Hospital, Kansas City, Dec. 11, 1917.

#### A CLINICAL PROGRAM

SURGICAL SYMPOSIUM, 8:30 TO 12:30 A. M.

Cases of Operative Treatment of Fractures:

1. Joint Fractures, Dr. H. E. Pearse.
2. Fractures of Long Bones; Lane Plate and Other Approximation Methods, Drs. H. Hill and T. G. Orr.
3. Ununited Fractures (Bone Transplantation), Dr. E. F. Robinson.
4. Arthroplasty.
5. Pathology of Bone Repair, Dr. A. E. Hertzler.
6. Roentgen Ray in Operative Fracture Work, Dr. E. H. Skinner.



## MEDICAL SYMPOSIUM, 1:30 TO 5:30 P. M.

## Cases of Arterial Diseases:

1. Heart—  
Myocarditis, Dr. Robert Sloan.  
Heart Block, Partial and Complete, Dr. F. W. Froehling.
  2. Aorta—  
Aortitis, Aneurism, Coronary Disease, Dr. A. Sophian.
  3. Peripheral Vessels—  
Different Types of Gangrene; Thrombo-Angiitis Obliterans, Dr. C. C. Conover.
  4. Kidney Lesions—  
With Discussion of Function Tests, Dr. G. H. Hoxie.
  5. Liver Diseases (of Various Etiology).  
Cirrhosis of Liver, Dr. P. T. Bohan.
  6. Cerebral Diseases—  
Spinal Diseases, Dr. G. W. Robinson.
  7. Skin Diseases—  
Syphilitic Endarteritis, Raynaud's Disease, Erythromelalgia, Dr. C. C. Dennie.
  8. Eye Disease—  
With Screen Demonstration of Diagnostic Importance of Examination for Early Arterial Disease, Dr. W. H. Schutz.
- Evening.—Interesting Program at Jackson County Medical Society.

HOWARD HILL, M.D., President,  
A. SOPHIAN, M.D., Secretary.

## MEMBERSHIP CHANGES, NOVEMBER, 1917

## NEW MEMBERS

Conway Bates, Ironton.  
J. S. Cannon, Anderson.  
Daniel E. Cullers, Stella.  
W. N. Deatherage, Hoberg.  
Jasper L. Gentry, Ava.  
John A. Hanks, Koenig.  
Prince Albert Holmes, Chesapeake, R. D. Mt. Vernon.  
Sidney Saul Levin, St. Louis.  
Maurice J. Lonsway, St. Louis.  
Edward L. Mize, Stotts City.  
Roy E. Myers, Stark City.  
Charles Palmer, Mountain Grove.  
Herman Ramming, Goodwater.  
J. J. Rinehart, Chaonia.  
T. R. Spell, Freistatt.

## CHANGE OF ADDRESS

James E. Ball, Richmond to St. Joseph.  
Carl H. Bryant, Bryant Bldg. to 836 West-over Road, Kansas City.  
R. S. Bryan, 3710 Olive St. to 1425 Boatmans Bank Bldg., St. Louis.  
J. W. Burgess, Belle to Greenwood.

John L. Cox, 911 N. 12th St. to 1021 Riden-bang, St. Joseph.

Harry S. Crossen, St. Louis to Portland, Mich.

O. K. Edgell, Eolia to Bowling Green.

Lee Roy Farmer, Hartville to Lee's Summit.

E. Fischel, 484 Lake St. to 82 Aberdeen Pl., St. Louis.

Frank N. Gordon, St. Louis to San Antonio, Texas.

Fred B. Hall, 3538 Washington Ave. to Lister Bldg., St. Louis.

J. W. Heddens, St. Joseph to New York City.

J. H. Lamb, Redford to Centerville.

Chas. H. Lester, 700 Shukert Bldg. to 638 Lathrop Bldg., Kansas City.

Edward X. Link, St. Anthony's Hospital to 3550 Russell Ave., St. Louis.

J. F. Mackey, Odessa to Kansas City.

Adolph A. Meador, Bellevue to Flat River.

F. J. Moeninghoff, Kansas City to Odessa.

C. Moore, St. Marys to Chaffee.

I. M. Owens, Leslie to Gerald.

Louis R. Padberg, 3614 California Ave. to 3630 S. Grand, St. Louis.

Fred N. Pugsley, Kansas City to Honolulu, Hawaii.

E. V. Rawlins, Elwood to Appleton City.

Jos. B. Riley, St. Joseph to Toronto, Kan.

Robt. McE. Schaffler, 317 Argyle Bldg. to 406 Waldheim Bldg., Kansas City.

Samuel T. Smith, Harviell to Moffat, Colo.

Jos. E. Stewart, Wall Bldg. to 7 Aberdeen Pl., St. Louis.

George W. Wilson, St. Louis to New York City.

## REINSTATED

James B. Prichard, St. Louis.

## DROPPED

John T. Beale, Lovelock, Nev.

Homer Beall, Malden.

Lerton V. Dawson, Plainview, Texas.

W. H. Hazelton, Kansas City.

Robt. M. King, Centerville.

Thos. A. McLennan, Marshall.

Benj. E. Moody, College Mound.

## EXPELLED

H. J. Knapp, Perryville.

## DECEASED

Wm. S. Deutsch, St. Louis.

Joseph A. Hansler, San Antonio, Texas.

J. W. Hawkins, Glasgow.

## CORRESPONDENCE

### APPLIED FOR COMMISSION, BUT REJECTED

KAHOKA, MO., Nov. 12, 1917.

*To the Editor:*—In the list of physicians who had taken examination for Medical Reserve Corps which appeared in the *Missouri JOURNAL*, I notice that of Dr. W. B. Sisson and myself were not included. We took the examination in June at Trenton, Mo., and were both rejected on account of physical disqualifications. We were the first to make application from this county.

Fraternally yours,  
(Signed) FREDERICK A. JOHANSEN.

### NOT A SLACKER

BRECKENRIDGE, MO., Nov. 13, 1917.

*To the Editor:*—I do not want to be classed as a slacker. I was the first man in the profession in Caldwell County, Mo., to make application for appointment in the Medical Officers Reserve Corps. I was examined at Fort Leavenworth, Kan., Oct. 30, 1916, by Capt. Ernest R. Gentry, and was informed by the Surgeon-General, U. S. A., that I was physically disqualified, much to my sorrow. I have albumen and casts, but feel well and would start any minute in the day if they would take me. I have never seen my name among those taking the examination, so write you.

Yours truly,  
(Signed) J. A. WATERMAN.

### THE RED CROSS INSIGNIA

*To the Editor:*—Having been appointed chairman of the investigation committee of the Kansas City Chapter American Red Cross, I take the liberty of asking for a small space in your *Journal* to explain to some innocent offenders their misuse of the Red Cross insignia.

Jan. 5, 1915, Congress passed an act incorporating the American National Red Cross, selecting as their emblem the cross composed of five perfect squares, red in color, and made it a misdemeanor for persons to use this Red Cross in advancing any private or corporate institutions. The emblem belongs to the United States government and, in my estimation, should be held as sacred as the stars and stripes, especially in war times. Picture in your mind a Red Cross ambulance on the firing line, its neutral crew treating friend and foe alike, relieving pain and suffering, and think of the lives saved by administering first aid to the injured and wounded; let us all learn to re-

spect this emblem and when we see it, execute a mental salute; and to retain this command and respect the insignia must not become common or be misplaced.

Section 4 of the Act of Congress referred to above says, "it shall be unlawful for any person to represent himself to be a member of, or an agent for the American National Red Cross, or for any person to wear or display the sign of the Red Cross, or any insignia colored in imitation thereof. Nor shall it be lawful for any person to use the sign of the Red Cross as an advertisement."

Let us remove the cross from our automobiles and take no undue advantage or misappropriate its meaning, thereby cooperating with the worthy movement in a measure becoming the medical profession.

Kansas City, Mo. ALLAN HUGHES,  
Chairman.

### PUBLIC HEALTH NURSES

Oct. 23, 1917.

*To the Editor:*—Public health nurses have greatly increased during the past few years. Hundreds, perhaps thousands of small towns and rural communities as well as large cities, have come to regard them as indispensable community servants. Their service represents at least a minimum of skilled nursing which can usually be supplemented with safety by family, neighbors or trained attendants. They also stand as much for the protection of health as for the care of the sick. Their value as health agents is now pretty generally recognized by health officers, school boards, and manufacturers as well as by the public itself.

Because their work is largely preventive, one of their chief values is that they persuade many people to call upon their doctor before an illness has become serious enough to have convinced them that it was necessary to consult him. Nevertheless, their opportunities as health teachers most often depend upon and follow their entré to the homes in time of need due to illness. They are very dependent upon the local physicians because it is an invariable rule that no visiting or public health nurse shall perform any treatment nor administer any medicine, nor even make repeated calls upon a patient except with the consent and direction of the family physician.

Oftentimes these facts are not understood by country doctors and consequently they refuse to call for the nurses' assistance and even discourage their patients and their families from doing so. This situation is becoming less and less frequent, but still exists in some localities and among some doctors.

More than ever, these nurses will be needed now that so many physicians are being called to military duty and yet they cannot serve the peo-



ple unless the doctors who remain at home will recognize and call upon them.

The members\* of the National Organization for Public Health Nursing, among whom are many Red Cross town and country nurses, have instructed me to bring this matter to the attention of the state medical associations in the hope that they will see fit to urge their county societies to interpret the work of public health nurses to their members to clear away the misunderstandings which are now in some places preventing the best and fullest use of public health nurses and to encourage employment of their services.

Representative women in this field will welcome opportunities to discuss the subject before state or local associations.

Sincerely yours,

ELLA PHILLIPS CRANDALL,

*Executive Secretary.*

600 Lexington Avenue,  
New York City.

---

"Somewhere in Flanders."

Oct. 23, 1917.

*My Dear Goodwin:*

Was glad to get your letter and learn mine had been received. A lot of our mail seems to have gone astray. As you see by the address I have changed my location; only temporarily, however. A month ago Mal Clopton and I were ordered up to No. 3 Canadian Casualty Clearing Station as a surgical team — reinforcements for the Flanders show! Murphy had another team from No. 21 and Lawrence Post and Alan Siebert have recently come up to a third "C. C. S."\* We have been in the midst of things in the advance zone and some of the medical side as seen here may interest you. The military end is the most interesting, but of that I cannot write, unfortunately.

The casualty clearing station at railhead has evolved into what is perhaps the most important single link in the British Medical Military Service. Starting as a small hospital whose chief function was to collect the wounded from the field ambulances and put them on a train for the Base Hospital, doing very little actual medical work, they have increased in number, size and scope of work until today all the important and major surgery is being done at them. There are many C. C. S.'s in this area and we are one of ten surgical teams working here; the others are two Australian, two English and five Canadian, besides a number of other officers doing minor surgery, medicine, etc. We are as near the front line as is practicable to send hospital trains. Recently the wounded have been brought directly to the C. C. S. from the advanced dressing station without going through the main stations of the field ambulance. Experience has

shown the value of operative measures as soon as possible after the wound has been received. As I said, there are a number in this district and some attempt has been made to specialize. Thus, where Murphy was working many head cases were sent. An attempt to place a C. C. S. directly behind the line for abdominal work was a failure as the Bosche shelled it out twice. We are well within shell range and hear the shells going to either side. So far we have not been shelled. We have been bombed, however, and the Hun planes go over nearly every night — sometimes many times a night. There were a number of casualties here just before we came up, and since we have been here the hospital has been bombed. Three nights ago two nurses were killed by bombs at a C. C. S. just below us. Everything else in the neighborhood is scattered or concealed but the hospitals. These were intentionally placed together and made prominent when it was thought the German had some humanity. Hence it makes a target that is hard to miss. It is an unpleasant sensation to say the least to hear the hum of a German plane over your head and then see the bombs begin to fall.

We have seen some busy times during the past month. Five teams work at night and five during the day, changing at nine in the morning and at night, the entire group changing alternate weeks. The patients are received in a preparation hut where the clothes are cut off and the extent of the injuries determined. Badly shocked cases are taken to a resuscitation tent for stimulation and rest. Other cases are tagged for operation and placed in a row — still on the original stretcher — and minor injuries are tagged for evacuation. At times there will be sixty or seventy cases awaiting their turn for operation. The operating "theatre" is a long hut with eight tables about 7 feet apart. Space is left along one side wide enough for the stretchers to be brought in, and along the other side there is a shelf holding instruments, dressings, wash basins, etc. At one end of the room is a sterilizer heated by an oil lamp, and at the other a stove burning soft coal. Over each table a wire furnishes support for a cluster of lights, salt apparatus and means of suspension for the arms and legs. Each team consists of a surgeon, anesthetist, nurse and orderly. You have no idea of the nature of the case until it is on the table. It may be a fractured skull, a penetrating chest wound, an abdomen or an extremity requiring immediate decision as to amputation. Many of the cases have multiple wounds. There is a roentgen-ray equipment, but its capacity is limited and an extensive outfit is really needed for the work at a C. C. S.

As far as possible, cases are evacuated by train soon after operation, and so the surgeon rarely sees the results of his work. Only the very serious cases, head cases and abdomens, are held over, and these only a few days at the

---

\* Casualty clearing station.

most. We have seen as many as ten trains of from 500 to 700 patients each evacuated from this group of four C. C. S.'s in twenty-four hours. The wounds are chiefly the result of high explosive shells; next bomb wounds, then shrapnel, and last of all, bullet wounds. Mechanical revision is the essential feature of the surgery. Depending on the location and size, the wounds are packed with gauze, or gauze with B. I. P. (bismuth, iodoform-paraffin paste) or Carrel tubes are put in the wound. Small wounds may be excised and closed. No one method of treatment is applicable to all wounds. Fractured femurs and elbow and knee joint injuries are usually put on Thomas splints for transportation.

The cases of chief interest from a medical standpoint are the chest injuries, and the "mustard oil gas" cases.

The weather is raw and damp here, and we are just beginning to get in the nephritics. We have been able to get about the country a good deal and have had a most interesting experience, to say the least. We have been in Ypres, or rather what is left of it, but did not stay long as the Bosche was dropping in shells. We have also had some good views of the battle area.

Things are going along very well at the base at ———. They have been very busy recently. The most unpleasant feature of the work in France is the unevenness. At times we will be extremely busy and need every man we have. Then a period of loafing when a third of the staff could carry on the work. Everyone is happy and in good spirits until the work gets too slack and then we begin to speculate on the number of years we will be here. The health as a whole is splendid, and I think we were fortunate in the time of our arrival as it has given us a summer to get adjusted to the new method of living. The officers have just moved into huts after four months of tent life. We sleep in small tents up here and have no heat—and I assure it's a rather chilly way to live. It rains every day almost in Flanders, and there is no soil—only mud.

We will be very glad to get the Missouri Journal at the hospital. Home news is always welcome.

Sincerely,

BORDEN VEEDER.

P. S.—We see a great many German prisoners going through and have operated upon a number. They seem quite fed up and, with the exception of the German officers I've talked with, much discouraged with the war and glad to be prisoners. I sent Archer O'Reilly a Bosche helmet I got from a prisoner taken in the battle of Broodschiede ridge. Rather an interesting souvenir. I wish I could send you a picture of Clopton and me in our tin hats and gas masks, and our tent with the sandbags around, but cameras are forbidden. We are some sights.

## MISCELLANY

### LICENSED TO PRACTICE

At the September meeting of the State Board of Health twenty applicants for license to practice were examined, sixteen of whom were successful. In addition to this number ten were licensed by reciprocity. The following were granted licenses: William Sherman Baldwin, St. Louis; William Hy. Ambrose Barrett, St. Louis; Thomas C. Brown, Kansas City, Kan.; Thomas H. Byas, Tiptonville, Tenn.; William Cletus Cooney, Sistersville, W. Va.; Wade Corporal Dansey, Detroit, Mich.; Albert Browning Dismore, Chattanooga, Tenn.; Garvin J. Dixon, Chicago; John C. Dyer, Washington, D. C.; Charles Paul Engel, Morrison, Mo.; Herbert Thomas Garrison, Keenes, Ill.; Harvey L. Hayes, Kansas City, Kan.; Benjamin Jackson, St. Charles, Mo.; Grover C. McCormack, St. Louis; Warren E. McCrary, Kansas City, Mo.; Karl Augustus Menninger, Topeka Kan.; Wade H. Miller, Kansas City, Mo.; James Gordon Montgomery, Wichita, Kan.; Scott S. Morrison, La Cygne, Kan.; Lincoln H. Norwood, Kansas City, Mo.; Nelse Frederick Ockerblad, Kansas City, Mo.; John L. Sims, Chicago; Lloyd Jesse Statler, Kansas City, Mo.; Samuel D. Thomas, Chicago; George Cannon Trawick, St. Louis; Leo Hy. Wallendorf, Kansas City, Mo.

### MISSOURI PHYSICIANS EXAMINED FOR COMMISSIONS IN MEDICAL RESERVE CORPS

We publish below the names of physicians who have applied for membership in the Medical Officers' Reserve Corps since the last list was published in our October number. We will appreciate information from any members who discover errors in these lists. We know the list is not complete because we have been unable to obtain the names of physicians examined by some of the examining boards but we are doing the best we can to give prominence and honor to the physicians of Missouri who are responding to the call of the country in the present crisis. Not all the physicians named in these lists have been commissioned as some have been rejected for physical disability and for other reasons. We believe, however, it is proper and right that we publish the names of all who apply whenever we can obtain the correct information. We cannot give the present addresses but we are making an effort to send THE JOURNAL to those who enter the service as soon as we learn their location and will change the address of THE JOURNAL as often as the officer is moved from one station to another. The list follows:

Bailey, E. S., St. Louis  
Bradford, G. A., Columbia  
Brown, John Y., St. Louis.  
Burgess, A. R., St. Louis  
Campbell, C. S., St. Louis  
Cecil, Geo. E., Flat River  
Cooper, Thos. E., St. Louis  
Davis, Wm. D., St. Louis  
Edgell, O. K., Eolia  
Gaston, E. S., Meta  
Hammersley, George O.,  
Campbell  
Hays, B. W., Jackson  
Kelling, R. J., Campbell  
Locker, Geo. E., Iantha

Mars, W. T., Kirkwood  
Martin, A. J., East Prairie  
Martin, James H., Ironton  
Martin, W. W., Kirksville  
McCormack, G. C., Bowling  
Green  
Menefee, Chas. D., Perry  
Miller, H. F., St. Louis  
Mudd, Harvey G., St. Louis  
Neunlist, P. C., Old Monroe  
Niedringhaus, R. E., St. Louis  
Parker, J. H., Cedar Hill  
Reeds, Isaac M., Florida  
Storinont, R. M., Centerville  
Toulson, Ellington, Kirksville  
Van Raalte, Martin, St. Louis



### FLEMING ANGERS PHYSICIANS

The statement that Kansas City's doctors are not doing their share in Liberty bond buying, made by Fred W. Fleming, chairman of the committee on professions, has drawn fire from physicians here, who say they have subscribed \$200,000 to the second Liberty Loan.

"The doctors have been bad actors in this campaign," Mr. Fleming said. He praised the loyalty of the lawyers and the architects.

Dr. George C. Mosher, president of the Jackson County Medical Society, gave the physicians' side of the matter in a letter to that body.

"I feel, as your president, in duty bound," Dr. Mosher said, "to express the regret that fills me that our attitude as an organization is made a target for adverse criticism, and, lest it should appear that I have been an official slacker and our men derelict in our patriotic duty, I shall state the facts.

"In a canvass over the telephone and through a committee of 120 members of the Jackson County Medical Society, I am told that one man subscribed \$25,000, two \$20,000, three \$10,000, five \$5,000, twelve \$1,000, twenty more than \$500, and the aggregate totals \$200,000 of the second Liberty Loan.

"In addition to the actual investment in bonds, the call to the colors will take all the younger doctors and half the older men. One office alone gave nine of its eleven men. One of these men, Dr. C. A. McGuire, was wounded in France at the time Will Fitzsimons fell. It sounds pathetic to call such a body a set of 'bad actors.'"—*Kansas City Times*.

### BOOBS!

On the square, isn't Kansas City a city of boobs?

Let it sink in. A city of boobs. We blow a lot about our superior enterprise and intelligence. But we are kidding ourselves. We are just plain boobs!

We let the electric light company turn off the power on us for an hour or two every evening. There are plenty of electric signs going. But the city administration doesn't see anything it can do about it. So we patiently light our homes by candles and tell manufacturers who want to use electric power to go to some other city, Kansas City, Kan., or St. Louis, or Cleveland, where they can get power. Incidentally, we have permitted the private electric light company to charge us half as much again for service as the people on the Kansas side pay their municipal plant.

Boobs! That's what we are.

For years we have been fussing along without gas. We have eaten cold breakfasts and dinners, done our washing in cold water, risked holdups on unlighted streets, hung lanterns on the gas posts, and blown up our houses from explosions of gas that had gone out and then come on. Today we are paying double our contract price for gas and not getting any. And as a city we are doing nothing to help ourselves.

Boobs again!

We let the street railway get away with a 30-year franchise. Then we wait at the crossing for two or three cars to go by until one comes that we can squeeze into. Oh, yes, the company is making improvements, to be sure. It has installed some natty little boxes on the cars for us to drop our nickels into. That surely ought to satisfy us.

Once more, boobs.

We don't know whether we are going to have any coal to heat our houses with, and we aren't particularly disturbed about it. We go without medical in-

spection of our schools. We see the chance for an interurban station go glimmering through a veto by the mayor.

Oh, we are a fine, up-to-date city, we are, bursting with push and enterprise. And we can't even handle the simple, everyday matters of cooking and lighting and transportation!

Boobs! That's all!—*Kansas City Star*.

### HEALTH OF SOLDIERS IN CAMP AVERAGES BETTER THAN THAT OF CIVILIANS

Col. Weston P. Chamberlain, of the the Surgeon-General's Office, general sanitary inspector for a group of Regular Army, National Army, and aviation camps, has returned from an inspection trip to Camp Grant, Rockford, Ill. (National Army); Camp Pike, Little Rock, Ark. (National Army); Fort Thomas, Newport, Ky. (Regular Army recruit depot); and Camp Sherman, Chillicothe, Ohio (National Army); Selfridge Field, Mount Clemens, Mich. (aviation); Camp Custer, Battle Creek, Mich. (National Army); Canute Field, Rantoul, Ill. (aviation); Scott Field, Belleville, Ill. (aviation); Camp Taylor, Louisville, Ky. (National Army); and Wilbur Wright Field, Fairfield, Ohio (aviation).

"At the National Army camps visited the percentage of sick, practically all of whom are under treatment in cantonment hospitals, ranges from below 1 per cent. to slightly below 2 per cent., except at Camp Pike, where it is considerably higher as the result of measles among the men," Colonel Chamberlain stated. "Most of the men at Camp Pike, by the way, are from rural districts, and it is the rule that the proportion susceptible to measles is higher among these than among men from more thickly populated sections, who have usually had measles in childhood.

"There is extremely little serious illness at any of the camps. It should be borne in mind that in the Army a man is classed as 'sick' if he is excused from duty for even the slightest indisposition, and that soldiers are placed in the hospital for trivial illnesses for which in civil life they would not consider going to a hospital. In the military service there are no facilities in the barracks for giving such care and attention as is possible in a home where members of the family can attend to nursing; consequently men with minor disabilities are ordered into a hospital. Soldiers are also sent to the hospital for the protection of their comrades if there is the slightest indication of anything which may later be found to be a contagious disease.

"Among the conditions leading to treatment in hospital may be mentioned colds, if at all severe, tonsillitis, slight injuries, and other comparatively light ailments. Many men are in hospitals with ailments which they brought with them to camp. The point to be emphasized is that every man showing departure from good health is put where he will get the best of care and can be carefully watched against the appearance of anything more serious.

"The only serious disease found at any of the camps was pneumonia. The results attained in handling this disease are indicated by the latest figures from Camp Sherman. There were forty-three cases in October in a command with an average strength for the month of 19,000. Of these cases only three had died during the month, a mortality of 7 per cent. In civil life the average mortality for pneumonia is between 15 and 20 per cent. The latest type of serum treatment for pneumonia is used at all the camps.

"It may confidently be stated that the physical condition of the men will improve under military training and that their natural resistance to disease will steadily increase. The physical training, outdoor life, and regular hours incidental to this training are factors in building up their health and resistance.

"All military camps are inspected once each month by an officer of the Surgeon-General's Office to detect and correct defects in sanitation. The sanitary conditions at the camps far excel those generally obtaining in civil life, and, of course, this will advantageously affect health statistics in the Army.

"The general sanitary conditions at every camp inspected were found to be excellent. The flying fields are completely equipped so far as comforts and sanitary arrangements are concerned. Excellent water is provided at all the camps—filtered and chlorinated in every case where this is necessary. All the camps have complete sewer systems. Several flying camps, from which untreated sewage could not be discharged into near-by rivers without nuisance, have sewage disposal plants.

"Each National Army camp has a 1,000-bed hospital. Those at Chillicothe, Louisville, and Little Rock are practically complete except as to steam fittings in some of the unoccupied wards. Those at the other camps are not quite so far advanced but will be done in two or three weeks. Each hospital has sufficient wards in operation to accommodate all the sick in the camp. These hospitals are equipped with excellent operating rooms, roentgen-ray machines, laboratories, diet kitchens for each ward in addition to the main kitchens, and are otherwise designed and equipped in accordance with the most approved modern practice. The wards are in charge of Medical Reserve Corps officers—physicians and surgeons who are specialists in their respective lines—assuring the highest grade of treatment for the soldiers. Each hospital is under the control of an officer of the Medical Corps of the Regular Army and has its own ample force of trained women nurses."

#### DEVASTATION OF POLAND BY GERMANY BUT ONE STEP IN "THE PRUSSIAN SYSTEM PLANNED TO CONQUER AND ENSLAVE THE WORLD BY FORCE AND BRUTALITY"

The United States Food Administration issues the following article on "The Prussian System," as told by F. C. Walcott at a conference of field men held September 12. Mr. Walcott introduces his subject with this preamble:

*This I have seen. I could not believe it unless I had seen it through and through. For several weeks I lived with it; I went all about it and back of it; inside and out of it was shown to me—until finally I came to realize that the incredible was true. It is monstrous, it is unthinkable, but it exists. It is the Prussian system.*

A year ago I went to Poland to learn its facts concerning the remnant of a people that had been decimated by war. The country had been twice devastated. First the Russian Army swept through it and then the Germans. Along the roadside from Warsaw to Pinsk, the present firing line 230 miles, near half a million people had died of hunger and cold. The way was strewn with their bones picked clean by the crows. With their usual thrift the Germans were

collecting the larger bones to be milled into fertilizer, but finger and toe bones lay on the ground with the mud-covered and rain-soaked clothing.

Wicker baskets were scattered along the way—the basket in which the baby swings from the rafter in every peasant home. Every mile there were scores of them, each one telling a death. I started to count, but after a little I had to give it up, there were so many.

#### DIED BY HUNDREDS OF THOUSANDS

That is the desolation one saw along the great road from Warsaw to Pinsk, mile after mile, more than 200 miles. They told me a million people were made homeless in six weeks of the German drive in August and September, 1916. They told me 400,000 died on the way. The rest, scarcely half alive, got through with the Russian Army. Many of these have been sent to Siberia. It is these people whom the Paderewski committee is trying to relieve.

In the refugee camps 300,000 survivors of the flight were gathered by the Germans, members of broken families. They were lodged in jerry-built barracks, scarcely waterproof, unlighted, unwarmed in the dead of winter. Their clothes, where the buttons were lost, were sewed on. There were no conveniences, they had not even been able to wash for weeks. Filth and infection from vermin were spreading. They were famished, their daily ration a cup of soup and a piece of bread as big as my fist.

#### DESOLATION IN WARSAW

In Warsaw, which had not been destroyed, a city of 1,000,000 inhabitants, one of the most prosperous cities of Europe before the war, the streets were lined with people in the pang of starvation. Famished and rain soaked, they squatted there with their elbows on their knees or leaning against the buildings, too feeble to lift a hand for a bit of money or a morsel of bread if one offered it, perishing of hunger and cold. Charity did what it could. The rich gave all that they had, the poor shared their last crust. Hundreds of thousands were perishing. Day and night the picture is before my eyes—a people starving, a nation dying.

In that situation, the German commander issued a proclamation. Every able-bodied Pole was bidden to Germany to work. If any refused, let no other Pole give him to eat, not so much as a mouthful, under penalty of German military law.

This is the choice the German government gives to the conquered Pole, to the husband and father of a starving family: Leave your family to die or survive as the case may be. Leave your country, which is destroyed, to work in Germany for its further destruction. If you are obstinate, we shall see that you surely starve.

#### FACING DEATH OR SLAVERY

Staying with his folk, he is doomed and they are not saved; the father and husband can do nothing for them; he only adds to their risk and suffering. Leaving them, he will be cut off from his family; they may never hear from him again nor he from them. Germany will set him to work that a German workman may be released to fight against his own land and people. He shall be lodged in barracks, behind barbed-wire entanglements, under armed guard. He shall sleep on the bare ground with a



single thin blanket. He shall be scantily fed, and his earnings shall be taken from him to pay for his food.

That is the choice which the German government offers to a proud, sensitive, high-strung people. Death or slavery.

When a Pole gave me that proclamation, I was boiling. But I had to restrain myself. I was practically the only foreign civilian in the country, and I wanted to get food to the people. That was what I was there for, and I must not for any cause jeopardize the undertaking. I asked Governor-General Von Beseler, "Can this be true?"

"Really, I cannot say," he replied. "I have signed so many proclamations; ask General Von Kries."

So I asked General Von Kries. "General, this is a civilized people. Can this be true?"

#### COOLY ADMITTED BY GERMAN OFFICER

"Yes," he said; "it is true"—with an air of adding, why not?

I dared not trust myself to speak; I turned to go. "Wait," he said. And he explained to me how Germany, official Germany, regards the state of subject peoples.

Even now I find it hard to describe in comprehensible terms the mind of official Germany, which dominates and shapes all German thought and action. Yet it is as hard, as clear-cut, as real as any material thing. I saw it in Poland; I saw the same thing in Belgium; I hear of it in Serbia and Roumania. For weeks it was always before me, always the same. Officers talked freely, frankly, directly. All the staff officers have the same view.

Let me try to tell it, as General Von Kries told me, in Poland, in the midst of a dying nation. Germany is destined to rule the world, or at least a great part of it. The German people are so much human material for building the German State; other people do not count. All is for the glory and might of the German State. The lives of human beings are to be conserved only if it makes for the State's advancement, their lives are to be sacrificed if it is to the State's advantage. The State is all; the people are nothing.

Conquered people signify little in the German account. Life, liberty, happiness, human sentiment, family ties, grace, and generous impulse, these have no place beside the one concern, the greatness of the German State.

#### STARVATION "WORKING FOR GERMANY"

Starvation must excite no pity; sympathy must not be allowed, if it hampers the main design of promoting Germany's ends.

"Starvation is here," said General Von Kries. "Candidly, we would like to see it relieved; we fear our soldiers may be unfavorably affected by the things they see. But since it is here, starvation must serve our purpose. So we set it to work for Germany. By starvation we can accomplish in two or three years in East Poland more than we have in West Poland, which is East Prussia, in the last hundred years. With that in view, we propose to turn this force to our advantage."

"This country is meant for Germany," continued the keeper of starving Poland. "It is a rich alluvial country which Germany has needed for some generations. We propose to remove the able-bodied work-

ing Poles from this country. It leaves it open for the inflow of German working people as fast as we can spare them. They will occupy it and work it."

Then with a cunning smile, "Can't you see how it works out? By and by we shall give back freedom to Poland. When that happens Poland will appear automatically as a German Province."

#### SAME METHOD IN BELGIUM

In Belgium General Von Bissing told me exactly the same thing. "If the relief of Belgium breaks down we can force the industrial population into Germany through starvation and colonize other Belgians in Mesopotamia, where we have planned large irrigation works; Germans will then overrun Belgium. Then when the war is over and freedom is given back to Belgium, it will be a German Belgium that is restored. Belgium will be a German Province, and we have Antwerp—which is what we are after."

In Poland the able-bodied men are being removed to relieve the German workman and make the land vacant for Germany. In Belgium the men are deported that the country may be a German colony. In Serbia, where three-fourths of a million people out of three million have perished miserably in the last three years, Germany hardens its heart, shuts its eyes to the suffering, thinks only of Germany's gain. In Armenia, 600,000 people were slain in cold blood by Kurds and Turks under the domination and leadership of German officers—Germany looking on, indifferent to the horror and woe, intent only on seizing the opportunity thus given. War, famine, pestilence—these bring to the German mind no appeal for humane effort, only the resolution to profit from them to the utmost that the German state may be powerful and great.

#### BRUTAL TREATMENT OF WOMEN

That is not all. Removing the men, that the land may be vacant for German occupation, that German stock may replace Belgians, Poles, Servians, Armenians, and now Roumanians, Germany does more. Women left captive are enslaved. Germany makes all manner of lust its instrumentality.

The other day a friend of mine told me of a man just returned from northern France. "I cannot tell you the details," he said, "man to man, I don't want to repeat what I heard." Some of the things he did tell—shocking mutilation and moral murder. He told of women, by the score, in occupied territory of northern France, prisoned in underground dungeons, tethered for the use of their bodies by officers and men.

If this is not a piece of the Prussian system, it is the logical product of disregard of the rights of others.

Such is the German mind as it was disclosed to me in several weeks' contact with officers of the staff. Treaties are scraps of paper if they hinder German aims. Treachery is condoned and praised if it falls in with German interest. Men, lands, countries are German prizes. Populations are to be destroyed or enslaved so Germany may gain. Women are Germany's prey; children are spoils of war. God gave Germany the Hohenzollern and together they are destined to rule Europe and, eventually, the world—thus reasons the Kaiser.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1917

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Wright County Medical Society, Dec. 5, 1916.  
 Webster County Medical Society, Dec. 6, 1916.  
 Platte County Medical Society, Dec. 8, 1916.  
 Cape Girardeau County Medical Society, Dec. 15, 1916.  
 Livingston County Medical Society, Dec. 16, 1916.  
 Madison County Medical Society, Dec. 17, 1916.  
 Carter-Shannon County Medical Society, Dec. 20, 1916.  
 Atchison County Medical Society, Dec. 26, 1916.  
 Linn County Medical Society, Dec. 30, 1916.  
 Clark County Medical Society, Dec. 30, 1916.  
 Benton County Medical Society, Dec. 30, 1916.  
 Chariton County Medical Society, Jan. 1, 1917.  
 Schuyler County Medical Society, Jan. 5, 1917.  
 Crawford County Medical Society, Jan. 9, 1917.  
 Adair County Medical Society, Jan. 10, 1917.  
 Dent County Medical Society, Jan. 10, 1917.  
 Mississippi County Medical Society, Jan. 16, 1917.  
 Camden County Medical Society, Jan. 23, 1917.  
 Barton County Medical Society, Jan. 30, 1917.  
 Scott County Medical Society, Feb. 13, 1917.  
 Cooper County Medical Society, Feb. 21, 1917.  
 Gentry County Medical Society, Feb. 28, 1917.  
 Marion County Medical Society, March 1, 1917.  
 Ralls County Medical Society, March 13, 1917.  
 Perry County Medical Society, March 20, 1917.  
 Ste. Genevieve County Medical Society, March 27, 1917.  
 Reynolds County Medical Society, March 30, 1917.  
 Polk County Medical Society, April 7, 1917.  
 Pike County Medical Society, April 11, 1917.  
 Howell County Medical Society, April 17, 1917.  
 Cass County Medical Society, April 18, 1917.  
 Sullivan County Medical Society, April 20, 1917.  
 Ray County Medical Society, April 25, 1917.  
 Taney County Medical Society, May 1, 1917.  
 Vernon County Medical Society, May 10, 1917.  
 Dade County Medical Society, May 12, 1917.  
 Holt County Medical Society, May 14, 1917.  
 Carroll County Medical Society, May 23, 1917.  
 Pemiscot County Medical Society, June 6, 1917.  
 Laclede County Medical Society, June 13, 1917.  
 Johnson County Medical Society, June 27, 1917.  
 Moniteau County Medical Society, July 13, 1917.  
 Putnam County Medical Society, Aug. 5, 1917.  
 Audrain County Medical Society, Aug. 9, 1917.  
 Clay County Medical Society, Aug. 28, 1917.  
 Henry County Medical Society, Oct. 11, 1917.  
 Lafayette County Medical Society, Oct. 18, 1917.  
 Howard County Medical Society, Oct. 5, 1917.  
 Gasconade-Maries-Osage County Medical Society, Nov. 1, 1917.  
 De Kalb County Medical Society, Nov. 9, 1917.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of Oct. 6, 1917

The meeting was called to order at 8:45 p. m., Dr. A. H. Hamel presiding. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:  
 A paper entitled, "Sporadic Meningitis in Children," by Dr. Phelps G. Hurford. Discussion by Drs. George M. Tuttle, T. Wistar White, Jules M. Brady and Samuel E. Peden; Dr. Hurford closing.

A paper entitled, "A Pediatric View of the Tonsil and Adenoid Question," by Dr. John Zahorsky. Dis-

cussion by Drs. W. D. Black, Philip Hoffman, E. Lee Myers, Phelps G. Hurford, George M. Tuttle, Jules M. Brady, F. G. Adolph Bardenheier, Louis Behrens and Philip Scholz; Dr. Zahorsky closing.

A letter from the Liberty Loan Organization requesting the cooperation of the Society in placing a part of the second Liberty Loan Bonds was read. It was moved that a speaker from the Liberty Loan Organization be invited to address the Society at its meeting on October 13.

A letter from the Grant-Dent Memorial Association, asking the Society to join in a movement to save to posterity the home in which Ulysses Grant was married, was read and ordered filed.

Attendance 84.

#### Meeting of Oct. 13, 1917

The meeting convened at 8:45 p. m., Dr. A. H. Hamel presiding. The minutes of the meeting of October 6 were read and approved.

The scientific program consisted of a paper entitled, "Cervical Lacerations, Their Significance for the Patient," by Dr. Francis Rader. Discussion opened by Dr. Grandison D. Royston and continued by Drs. Hudson Talbott, Walter C. G. Kirchner, Robert M. Funkhouser and Reinhard E. Wobus; Dr. Rader closing.

Dr. Robert M. Funkhouser reported the activity of the Society in placing Liberty Loan bonds and in investing \$1,000 of the Bartscher Fund in Liberty bonds.

Dr. Funkhouser moved that this Society approve the widening of Washington Avenue from Jefferson to Grand Avenues and that a committee be appointed by the president to call on the mayor and comptroller to discuss plans to render this motion effective. Unanimously carried.

Judge Thomas Anderson addressed the Society on the importance of every citizen investing his money in Liberty bonds. On motion a vote of thanks was extended to Judge Anderson for his interesting talk. Attendance 55.

#### Meeting of Oct. 20, 1917

The meeting was called to order at 8:40 p. m., Dr. William H. Kerwin, vice president, presiding. The minutes of the meeting of October 13 were read and approved.

The scientific program consisted of the following:  
 A paper on "Some Experimental and Clinical Observations on Diuretics," by Dr. Charles H. Neilson. Discussion by Drs. J. Curtis Lyter, William D. Aufderheide, David S. Booth and Cyrus E. Burford; Dr. Neilson closing.

A paper on "Lumbar Puncture in Delirium Tremens," by Dr. Francis M. Barnes.

Attendance 53.

#### Meeting of October 27

The meeting convened at 8:35 p. m., Dr. Albert H. Hamel presiding. The minutes of the previous meeting were read and approved.

Dr. W. M. C. Bryan introduced the guest of the evening, Dr. David H. Dolley, pathologist of the Missouri State University, who delivered an address on "Excitation and Depression of the Nervous System in Shock."

Discussion opened by Major Major G. Seelig, M. O. R. C., and continued by Drs. Charles H. Neilson, Moses W. Hoge, Hillel Unterberg, Walter C. G. Kirchner and Robert M. Funkhouser; Dr. Dolley closing.

Dr. Robert M. Funkhouser moved a vote of thanks be extended Dr. Dolley for his exceedingly interesting and instructive paper. Carried.

Attendance 108.



**Meeting of November 3**

The meeting convened at 8:40 p. m., Dr. Albert H. Hamel presiding. The minutes of the previous meeting were read and approved.

The chair welcomed the members of the St. Louis Dental Society and extended the privilege of the floor to them.

The chair introduced the guest of the evening, Dr. W. W. Duke of Kansas City, who read a paper entitled, "Dental Sepsis as a Focal Infection," illustrated with lantern slides. Discussion by Drs. Arthur D. Black of Chicago and Drs. Ewing P. Brady and J. H. Kennerly of the dental profession; Dr. Duke closing.

The thanks of the Society were extended to Drs. Duke, Black, Brady and Kennerly for their contributions to the scientific program.

On motion the chair appointed Drs. Norvelle Wallace Sharpe, Louis C. Boisliniere and D. Buie Garstang a committee to look into the matter of securing the next meeting of the Southern Medical Association for St. Louis.

Attendance 298.

J. ALBERT SEABOLD, M.D., Secretary.

**BOONE COUNTY MEDICAL SOCIETY**

The Boone County Medical Society met in the Daniel Boone Tavern, in Columbia, on the afternoon and evening of Sept. 24, 1917. Invitations were extended to the county societies of Audrain, Callaway, Cole, Cooper, Howard and Randolph to meet with us on this date. This was one of the most enthusiastic medical meetings ever held in this part of the state.

The following resolutions were unanimously adopted by those present, and the secretary was instructed to present them to the State Journal for publication:

*Resolved*, That the functions of the laboratory of the State Board of Health be taken over by the laboratories of the State University.

Also:

WHEREAS, The medical profession is now and has been greatly handicapped in its work by the relatively high cost of serologic diagnosis of syphilis; and

WHEREAS, Such high cost necessarily denies the people of the State of Missouri the benefits of such an important diagnostic means; and

WHEREAS, The neglect of such benefits is in a large way responsible for the large number of inmates in our state insane hospitals and our schools for the defective, to say nothing of the large number of people whose productiveness is seriously impaired by such a disease; and

WHEREAS, Such a condition could be largely relieved by the state giving the physicians the laboratories properly equipped to do serologic work; therefore, be it

*Resolved*, By the members of the above-named societies, that such a condition be brought to the attention of the people of the State of Missouri, and the next legislature should be urged to see that such an appropriation is made so the benefits of such free serologic work would be available at the earliest possible moment.

The following program was carried out:

Dental Sepsis and Its Relation to Systemic Disease, by Dr. W. W. Duke of Kansas City.

Obstruction of the Vesical Neck, by Dr. C. E. Burford of St. Louis.

Microscopic Work of the State Board of Health and Certain Recommendations Regarding It, by Dr. W. A. Clark, Jefferson City.

Some Observations in a General Surgical Practice, by Dr. C. H. Van Ravensway, Boonville.

The following members were present: M. S. McGuire, Arrow Rock; A. I. Nichols, H. B. Pryor and Finis C. Suggett, Ashland; C. H. Van Ravensway and George J. Weitz, Boonville; W. E. Belden, D. H. Dolly, James Gordon, Frank P. Johnson, J. E. Jordan, A. W. Kampschmidt, A. W. McAlester, Max W. Meyer, Woodson Moss, F. G. Nifong, W. A. Norris, W. R. Shaefer, C. M. Sneed and J. E. Thornton, Columbia; V. Q. Bonham and C. H. Lee, Fayette; H. S. Major, G. D. McCall, E. L. Spence and Martin Yates, Fulton; R. R. Robinson, Hallsville; W. A. Clark, L. David Enloe, E. E. Mansur and J. S. Summers, Jefferson City; R. W. Berrey, C. L. Blanks, Paul E. Coil, J. F. Harrison, J. G. Moore, N. R. Rodas and George F. Toalson, Mexico; W. H. Williams, Mokane; E. L. Hume and E. McD. Rusk, New Bloomfield; A. R. McComas, Sturgeon; C. E. Burford, St. Louis; W. W. Duke, Kansas City.

Nonmembers present were: W. R. Smith, Ashland; George A. Bradford, E. R. Clark, C. W. Green, Dan G. Stine and B. A. Watson, Columbia; T. C. Richards, Fayette; C. B. Lawrence, Hallsville, and B. F. Reid, Jefferson City.

J. E. JORDAN, M.D., Secretary.

**BUCHANAN COUNTY MEDICAL SOCIETY**

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, Nov. 7, 1917, Dr. F. Spencer in the chair. There were twenty-eight members present. The minutes of the previous meeting were read and approved.

The resignation of Dr. E. F. Higdon was referred to the Board of Censors.

The committee appointed for the purpose of presenting the proposition to the Y. M. C. A. who offered our Society room for meeting purposes was continued and instructed to have their report ready at the next business meeting.

The committee appointed to investigate and report on the Whittington Hospital was also continued with instructions to make their report to this Society after they had made their report to the City Council.

On motion of Dr. Charles Geiger, seconded by Dr. Owens, the following committee was appointed for the purpose of conferring and to get in touch with the proper authorities and find out what progress had been made to lessen the widespread danger arising from the venereal peril. The following committee was appointed: Drs. Charles Geiger, L. J. Dandurant and J. B. Reynolds.

The privilege of the floor was granted Dr. Woodworth for the purpose of explaining his proposition to deliver a series of lectures on hygiene at the public schools; the matter was declared out of order and no action taken.

Dr. C. Geiger presented a highly instructive display of stereopticon plates on bone surgery, which was much enjoyed by the members present. A discussion followed by Drs. L. J. Dandurant, B. M. Colby, P. I. Leonard and C. Geiger.

On account of the lateness of the hour, the report of Dr. Daniel Morton on proceedings of the Clinical Congress of Surgeons of North America, was deferred to a later meeting.

W. F. GOETZE, M.D., Secretary.

**GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY**

The Gasconade-Maries-Osage County Medical Society met in the Osage County Courthouse, Linn, Oct. 25, 1917. The following doctors were present: J. A. Warner, C. H. Neilson and A. E. Horwitz of St. Louis; H. A. Rieckhoff of Chamois; C. T. Leach and John D. Seba of Bland; J. A. Hanks of Koenig;

L. E. Souder of Freedom; J. S. Enloe of Bay; Howard Workmann of Potsdam, and J. O. Cooper and James Jett of Linn.

Dr. Neilson read a paper on "Diuretics" and clinical observation in patients.

Dr. Horwitz delivered a lecture on "Tuberculosis of the Joints."

Dr. J. A. Warner spoke on "Serum Immunity."

These subjects were all very interesting and somewhat increased in interest by the questions of physicians present.

The evening session was a public health session and was open to the public, who generously responded to our invitation to be present and hear what was said. At this session our councilor, Dr. S. V. Bedford of Jefferson City, was present and explained the law enacted by the last legislature by which each county could secure a county hospital.

Dr. Enloe of Bay and Dr. Neilson of St. Louis made speeches on timely topics.

Dr. Horwitz spoke on "Flatfoot," and pointed out that the present high heel shoe was to blame for many of the foot troubles.

Dr. Warner gave a stereopticon lecture showing the various processes that must be taken in the preparation of serums. This illustrated lecture was very interesting to the public and made them better acquainted with manufacturing serums. Many laymen still hold a prejudice against serology, but if there were any "doubting Thomases" present they surely have been convinced.

After the public session there was another business session, at which Dr. J. A. Hanks of Koenig was elected a member of the society on the recommendation of Drs. Cooper, Jett and Leach.

On motion of Dr. S. V. Bedford, councilor, it was decided to hold a joint meeting of the following counties: Cole, Gasconade, Maries, Osage and Franklin. The last Thursday in April, 1916, was set for the date and Hermann was chosen as the place of that meeting.

The Linn doctors transported the visiting doctors from Bonnets Mill and return in automobiles free of charge.

Every member of this society is now in good standing, having paid annual dues.

JOHN D. SEBA, M.D., Secretary.

#### GENTRY COUNTY MEDICAL SOCIETY

The Gentry County Medical Society met in the office of Dr. G. W. Whiteley, Albany, November 6, at 2 p. m. After the reading of the minutes of the previous meeting the following members answered to roll call: Charles H. McCastlin, William T. Martin, J. A. Crockett, J. N. Barger, A. L. Woolis and G. W. Whiteley. Visitor present, Dr. A. M. Ganaway.

A letter from the Missouri State Committee of Defense was read, asking the Defense Committee to enroll six members or physicians from Gentry County in the Medical Reserve Corps. It was left to the County Auxiliary Committee to call for volunteers and if none responded, to draft by allotment. The number called for should be between the ages of 31 and 55 years.

Dr. C. H. McCastlin, although 61 years of age, volunteered, and also told the Society he intended to apply at once to the National Defense Committee to be enrolled. The doctor is hale and hearty and full of red blood, also enthusiastic, hoping to be allowed to do his bit. Others over the line are willing to go if called; no slackers here.

A resolution was passed to the effect that the physicians of the Society would give 50 per cent. of all practice of physicians going to the front to their families; also leaving it to the physician in attendance to give all if he thought advisable.

After several enthusiastic talks the Society proceeded to the election of officers for 1918, with the following result: President, Dr. D. E. Blacklock, King City; vice president, Dr. A. L. Woolis, Darlington; secretary-treasurer, Dr. G. W. Whiteley, Albany (reelected).

Adjourned to meet at Darlington pursuant to call of the president.

G. W. WHITELEY, M.D., Secretary.

#### NEWTON COUNTY MEDICAL SOCIETY

The Newton County Medical Society met in the office of Dr. A. W. Benton, Neosho, Oct. 9, 1917, Dr. J. B. Hancock, president, in the chair. There were twelve members present.

The minutes of the previous meeting were read and approved.

The meeting was devoted almost entirely to the reporting of cases and their discussion and all the members took part.

The applications of the following doctors were received and reported on favorably by the censors, after which all were duly elected to membership: Drs. J. S. Cannon, Anderson; D. E. Cullers, Stella; Roy Myers, Stark City.

The program of the next meeting is to consist of a paper or a case report from each of the following: Drs. Campbell, Cullers and Cannon. The meeting will be held on the third Tuesday in December instead of the second Tuesday, as we have been doing.

There being no further business the Society adjourned to the third Tuesday in December.

HORACE BOWERS, M.D., Secretary.

#### PERRY COUNTY MEDICAL SOCIETY

The Perry County Medical Society met in Perryville, Nov. 5, 1917, in the office of the president, Dr. D. F. Morton, who called the meeting to order with the following members present: Drs. William H. Barks, J. P. Clark, G. A. Blaylock, D. F. Morton, F. M. Vessells, J. W. Russell and E. N. Popp.

There was an informal and interesting discussion of tuberculosis of kidney.

The following resolution was introduced by Dr. W. H. Barks:

WHEREAS, It has come to the knowledge of the Perry County Medical Society, that one of its members, Dr. H. J. Knapp, Perryville, has recently been convicted by a jury of his county of the felony of abortion, now therefore, be it

*Resolved*, By the Perry County Medical Society in regular meeting assembled, that for the above mentioned reason he be and he is hereby expelled from said Society.

Seconded by Dr. G. A. Blaylock. Unanimously carried.

It was moved, seconded and carried that a copy of above resolutions be mailed to Dr. H. J. Knapp.

It was moved by Dr. J. W. Russell and seconded by Dr. J. P. Clark, that a copy of above resolutions of expulsion be sent to the president of the Missouri Board of Health. Unanimously carried.

It was moved, seconded and carried that Section 6 of Chapter XII.—County Societies, By-Laws Missouri State Medical Association, revised 1914, be included in the notice to Dr. H. J. Knapp, which reads as follows: Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council and to the House of Delegates.

F. M. VESSELLS, M.D., Secretary.



**SCHUYLER COUNTY MEDICAL SOCIETY**

The Schuyler County Medical Society met in regular session at the office of Dr. A. J. Drake, Downing, Thursday, Nov. 8, 1917. The following members were present: Drs. W. B. Hight of Queen City; W. F. Justice, B. B. Potter and W. A. Potter of Lancaster; A. J. Drake, H. E. Gerwig and J. B. Bridges of Downing. The meeting was called to order at 2 p. m. by Dr. B. B. Potter, president, and the minutes of the last meeting were read and approved.

A communication from the War Department asking for a list of the cripples in the county, the nature of their disability and manner of earning a living, was read and the doctors present agreed to furnish the list as they knew them.

A communication from the Surgeon-General of the U. S. Army, asking the doctors to organize for enlistment in the Medical Reserve Corps was discussed and will have further attention at our next meeting, December 13.

Next in order was the program which was "Diseases of the Gallbladder and Its Appendages."

The etiology and diagnosis was discussed by Dr. J. B. Bridges, medical treatment by Dr. W. A. Potter and surgical treatment by Dr. B. W. Hight. It was an interesting subject and the papers were well received and discussed.

The next meeting will be the annual meeting and election of officers and will be held at Lancaster, Thursday, December 13. All members are urgently requested to attend.

J. B. BRIDGES, M.D., Secretary.

**VERNON COUNTY MEDICAL SOCIETY**

The Vernon County Medical Society met in Nevada, Thursday, Nov. 13, 1917. This was St. Louis day, so called in honor of the St. Louis physicians who met with us. The morning hours were spent at the Vernon Sanitarium in surgical work. The operations were witnessed by many of the profession. At two o'clock the Society met at the Court House and was called to order by Dr. E. A. Dulin, president. The minutes were read by Dr. J. T. Hornback, secretary, and approved.

Dr. J. W. Marchildon of St. Louis held a clinic on diseases of the skin which was very interesting.

Hay fever was discussed by Dr. T. McLemore and others.

"What We Are Doing in France" was introduced by Dr. H. Unterberg of St. Louis in a masterly way. He dwelt particularly on the necessity of supplying the Medical Reserve Corps with a full quota of qualified physicians between the ages of 22 and 55 years. Vernon County's apportionment is eight physicians and so far only one has entered the service. This lecture was followed by lantern slides illustrative of hospital war scenes and a lecture by Dr. F. W. Bailey of St. Louis. Both of these gentlemen are in the army. Dr. Unterberg has a rank of captain and Dr. Bailey has a rank of major.

The physicians present from a distance were Drs. Albert B. Stone, Gail D. Allee and John L. McComb of Lamar; Wilbur Cline of Appleton City; Fred W. Bailey, H. Unterberg and J. W. Marchildon of St. Louis; W. L. Hopper of Ft. Scott, Kan. The local physicians present were Drs. E. H. Liston of Walker; Frank James of Sheldon; C. L. Keithly of Milo; George S. Walker of Harwood; Dr. Schaff of Moundville; Drs. Joseph F. Robinson, E. A. Dulin, J. T. Hornback, J. M. Yater, T. B. M. Craig, Charles B. Davis, G. C. Wilson, T. McLemore, L. H. Callaway, Q. M. Brown, William R. Summers. All visiting members were elected honorary members of the Society, and a vote of our high sense of appreciation for their kind attendance was extended to them.

E. A. DULIN, M.D., President,

J. T. HORNBACK, M.D., Secretary.

**WAYNE COUNTY MEDICAL SOCIETY**

The Wayne County Medical Society held an interesting meeting at Piedmont, October 10, the president, Dr. P. P. Burton, presiding.

Present were Drs. J. P. Price, Williamsville; George Toney and Timothy Freeman, Piedmont; J. J. Rinehart, Chaonia; P. P. Burton, Lowndes; R. J. Owens, Sr., Millspring, and E. E. Whiteside, Greenville.

Dr. Rinehart was welcomed as a new member, and Dr. Freeman was reinstated.

The Society adjourned to meet in Williamsville, November 13.

E. E. WHITESIDE, M.D., Secretary.

**WRIGHT COUNTY MEDICAL SOCIETY**

The Wright County Medical Society held its annual meeting in the City Hall at Mountain Grove, Nov. 2, 1917. The president, Dr. R. A. Ryan, called the meeting to order at 2 p. m. with the following members present: R. M. Rogers and J. A. Fuson, Mansfield; R. M. Norman, Ava; A. C. Ames, Mountain Grove; L. T. Vanoy, Norwood, and B. E. Latimer, Hartville; J. M. Hubbard, H. G. Frame and Charles Palmer, Mountain Grove (visitors).

The scientific program was as follows:

H. G. Frame presented a treatise on gonorrhea in the male. The doctor handled his subject in a most excellent manner and brought out a lively discussion by all present.

Dr. C. W. Burdett of Ava who had been assigned to the subject, The Right and Wrong Methods of Diagnosis, was not present, and it was decided to ask that the doctor prepare a paper on this subject for the next meeting.

A general discussion on the subject of carbuncles, followed by all members present.

The next subject considered was the organization of a Medical Defense Committee of Wright County. The following members were appointed to further the arrangements: R. M. Rogers, B. E. Latimer, H. G. Frame, R. M. Norman and L. T. Vanoy.

The Society passed a resolution that all members of our Society who are called to the Medical Reserve Corps shall be kept in good standing by our Society and a warrant be drawn on our treasury for the payment of any such members' dues.

There being a resolution on the table in regard to changing the name of our Society to the Wright-Douglas County Medical Society, it was regularly moved and seconded that this resolution be taken from the table and discussed. After due consideration, and because several of our members are residents of Douglas County, the ballot was spread and it was unanimously voted to change the name of our Society, and the secretary was instructed to send our charter in to the headquarters of the State Medical Association and have the change made in the name.

Applications for membership in our Society were read from Dr. J. L. Gentry, Ava, Dr. Charles Palmer, Mountain Grove, and Dr. H. G. Frame, by transfer from the Greene County Medical Society. The secretary was instructed to cast the vote of the entire Society for the election of these applicants.

Election of officers for the ensuing year resulted as follows: President, R. A. Ryan, Norwood (re-elected); vice president, H. G. Frame, Mountain Grove; secretary-treasurer, J. A. Fuson, Mansfield (re-elected); censor for three years, R. M. Norman, Ava.

Adjourned to meet in Mansfield the first Thursday in February. J. A. FUSON, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**HALAZONE - ABBOTT.** — Parasulphonedichloramido-benzoic acid. It is said to act like chlorine and to have the advantage of being stable in solid form. In the presence of alkali carbonate, borate and phosphate it is reported that halazone in the proportion of from 1:200,000 to 1:500,000 sterilizes polluted water. Halazone is used for the sterilization of water in the form of Halazone tablets, each containing 0.004 Gm. halazone mixed with sodium carbonate and sodium chloride. The Abbott Laboratories, Chicago (*Jour. A. M. A.*, Oct. 6, 1917, p. 1166).

**CAMIOFEN OINTMENT.** — An ointment obtained by mixing iocamfen (a liquid obtained by the interaction of iodine 10, phenol 20 and camphor 70 parts) with an equal weight of a lard-wax-oil of theobroma base, but containing nearly all of its iodine in the combined form. It has the properties of fatty iodine compounds, phenol and camphor, and is used in skin diseases. Schering and Glatz, New York (*Jour. A. M. A.*, Oct. 20, 1917, p. 1343).

### PROPAGANDA FOR REFORM

**AMMONOL.** — The *New York Medical Journal* advertises Ammonol as "The Stimulant, Ethical Antipyretic and Analgesic." There we learn, in part, that this very ordinary mixture of acetanilid, ammonium carbonate and sodium bicarbonate is "a specific in Fevers, Neuralgia, Atonic Dyspepsia, Pneumonia, Gastralgia, Bronchitis, Coryza, Catarrhal Influenza, La Grippe, Rheumatism, Hysteria, Alcoholism, Amenorrhea, Dysmenorrhea, Uterine and Intestinal Colic, Obstinate Vomiting, Catarrh of the Bile Ducts and Jaundice" (*Jour. A. M. A.*, Sept. 22, 1917, p. 1010).

**FAKE NEOSALVARSAN.** — The Department of Health of the City of New York has prepared a table whereby the suprious "neosalvarsan," recently located there may be identified. The department urges physicians to destroy all salvarsan and neosalvarsan containers after the use of the drug, to prevent illegitimate use of these containers (*Jour. A. M. A.*, Sept. 22, 1917, p. 1021).

**"NIKALGIN."** — A recent issue of *Collier's* contains an article on "Nikalgin." Far-reaching claims for its anesthetic and antiseptic virtues have been made. While no very definite information seems to be forthcoming regarding the preparation, it has been said to be "composed of quinine, hydrochloric acid and urea." This would indicate that "Nikalgin" may be nothing more wonderful than the well-known local anesthetic, quinine and urea hydrochloride, or a modification of it (*Jour. A. M. A.*, Sept. 22, 1917, p. 1024).

**AMERICAN-MADE SYNTHETICS.** — The Council on Pharmacy and Chemistry announces that, with the aid of the A. M. A. Chemical Laboratory, it proposes to make a study of the quality of American-made synthetics. This control of synthetic drugs, which as a result of the war are now made in this country, is believed to be in the interest of the American industry, for the protection of the public and for the satis-

faction of physicians. Since the manufacture of some of the synthetic drugs is to some extent experimental in this country, the Council feels confident that the responsible manufacturer will welcome this study as the best way of establishing complete confidence in his products (*Jour. A. M. A.*, Sept. 22, 1917, p. 1018).

**ESKAY'S NEURO PHOSPHATES.** — The Council on Pharmacy and Chemistry reports that Eskay's Neuro Phosphates (Smith, Kline & French Co., Philadelphia) is claimed to contain alcohol 17 per cent. and sodium glycerophosphate 2 grains, calcium glycerophosphate 2 grains, strychnine glycerophosphate 1/64 grain, in each dessertspoonful. It is called a "Nerve Tissue Reconstructive," and the advertising claims are based on the discredited theory that certain disorders are due to a deficiency of phosphorus in the nerve structures of the body, and that glycerophosphates are assimilated more readily than ordinary phosphates. The Council held Eskay's Neuro Phosphates ineligible for New and Nonofficial Remedies because of the unwarranted therapeutic claims made for it, because the combination is irrational and because the name is not descriptive of its composition (*Jour. A. M. A.*, Sept. 29, 1917, p. 1102).

**K-Y LUBRICATING JELLY.** — The Council on Pharmacy and Chemistry reports that K-Y Lubricating Jelly (Van Horn and Sawtell, New York) originally advertised as a lubricant for instruments and the hands, is now also recommended as a therapeutic agent. The Council held K-Y Lubricating Jelly in conflict with Rules 1, 4, 6 and 10 (*Jour. A. M. A.*, Sept. 29, 1917, p. 1102).

**SOME MISBRANDED NOSTRUMS.** — The following nostrums have been the subject of prosecution by the federal government under the Food and Drugs Act: DeWitt's Eclectic Cure, containing alcohol, opium and ether — DeWitt's Liver, Blood and Kidney Cure, essentially a water-alcohol solution bearing a cathartic drug, together with Epsom salt, nitrates and iodids. — Lightning Hot Drops, containing 60 per cent. alcohol and 48 drops of chloroform to the ounce, as well as ether and capsicum. — Mother's Salve Mother's Remedy, a salve consisting of petrolatum, with some glycerin, potassium chlorate and oils of cloves, cinnamon, eucalyptus, sassafras and pine or juniper. — Raney's Blood Remedy, a solution of potassium iodid and mercuric chloride in syrup of sarsaparilla with 16 per cent. alcohol. — Rattlesnake Oil Liniment, White Eagle Indian Rattlesnake Oil Liniment, containing little or no "rattlesnake oil." — Rosadalis, essentially a water-alcohol solution containing potassium iodid and a cathartic drug (*Jour. A. M. A.*, Oct. 6, 1917, p. 1192).

**ZIRATOL.** — The Council on Pharmacy and Chemistry reports Ziratul, sold by the Bristol-Myers Company, New York, ineligible to New and Nonofficial Remedies (1) because its composition is secret; (2) because the phenol coefficient is not stated on the label; (3) because its use by the public as a "vaginal douche" is advised, and (4) because the claim that Ziratul is the "Universal disinfectant" is unwarranted. The A. M. A. Chemical Laboratory reported that the preparation is a soap solution containing alpha-naphthol as its essential constituent (*Jour. A. M. A.*, Oct. 6, 1917, p. 1191).

**GONOSAN.** — The Council on Pharmacy and Chemistry reports that Gonosan, sold by Riedel and Co., Inc., is in the form of capsules said to contain oil of sandalwood and kava resin advertised for the treat-



ment of gonorrhea (as indicated by the name). It declared Gonosan inadmissible to New and Nonofficial Remedies because the therapeutic claims are exaggerated; because there is no evidence that the combination of kava resin with oil of santal is superior to oil of santal alone, and because the therapeutically suggestive name is conducive to indiscriminate and unwarranted use of the combination both by the profession and by the public (*Jour. A. M. A.*, Oct. 13, 1917, p. 1287).

**ALCRESTA IPECAC.**—This preparation of ipecac was admitted to New and Nonofficial Remedies in 1915. Recently claims have been advanced for this preparation which were not contemplated at the time of its acceptance and which appeared improbable and unwarranted in the light of the known properties of ipecac. The Council on Pharmacy and Chemistry brought these extravagant claims to the attention of Eli Lilly and Co., the proprietors of Alcresta Ipecac. As Lilly and Co. would neither discontinue nor modify these claims and did not submit any evidence to warrant them, the Council announces that it has been obliged to delete this proprietary from New and Nonofficial Remedies (*Jour. A. M. A.*, Oct. 20, 1917, p. 1373).

**HEPATIC TABLETS.**—The Council on Pharmacy and Chemistry reports that Hepatic Tablets (David Laboratories, Inc.) are claimed to "contain a combination of bile salts, pepsin, pancreatin, ext. nux vomica and cascara," and that in their exploitation the same therapeutic nonsense is made use of as that used in connection with two preparations of similar claimed composition, namely, Veracolate and Taurocol, previously reported on by the Council. The Council declares the therapeutic claims made for Hepatic Tablets unwarranted, the name objectionable and the combination of ingredients irrational (*Jour. A. M. A.*, Oct. 20, 1917, p. 1374).

**SOME MISBRANDED NOSTRUMS.**—The following "patent medicines" have been declared misbranded under the U. S. Food and Drugs Act: Sherman's Compound Prickly Ash Bitters, containing 20 per cent. alcohol, buchu and an emodin bearing drug.—"Thorn's Compound Extract of Copaiba and Sarsaparilla," a mixture of copaiba and sarsaparilla extract.—"Tarrant's Compound Extract of Cubebs and Copaiba," a mixture of copaiba and cubeb extract.—V. I. G., an aqueous solution of glycerin, morphin, berberin, hydrastin and salicylic acid (*Jour. A. M. A.*, Oct. 20, 1917, p. 1374).

**THE ACTIVE PRINCIPLE OF THE HYPOPHYSIS.**—Despite the suggestion obtained from certain advertising claims, the active principle of the pituitary gland has not been isolated in a pure state. An examination of commercial preparations showed that proteoses and possibly peptones were present in all (*Jour. A. M. A.*, Oct. 27, 1917, p. 1431).

**HAINES' GOLDEN TREATMENT.**—This is sold by the Golden Specific Co., Cincinnati, Ohio, as a cure for the liquor habit, which may be administered without the knowledge of the patient. The directions which accompany the three dollar package imply, however, doubt as to the probability of success unless the patient is anxious to be cured of the habit and takes the powders knowingly. The A. M. A. Chemical Laboratory reports that this worthless nostrum consists of powders which are composed essentially of milk sugar, starch, capsicum and a minute amount of ipecac (*Jour. A. M. A.*, Oct. 27, 1917, p. 1460).

## BOOK REVIEWS

**THE MEDICAL CLINICS OF NORTH AMERICA.** Volume I, No. 2 (Philadelphia Number, September, 1917). Octavo of 271 pages, 24 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Published bimonthly. Price, per year: Paper, \$10.00; Cloth, \$14.00.

This issue of Medical Clinics is devoted exclusively to cases occurring in Philadelphia Hospitals and compares favorably with the initial number published in July. Dr. Thomas McCrae of the Jefferson and Pennsylvania Hospitals, has contributed the leading article on Aortitis. Fifteen other valuable articles follow on varied subjects.

**THE PRINCIPLES AND PRACTICE OF DERMATOLOGY.** By William Allen Pusey, A.M., M.D. Third Edition. New York and London. D. Appleton and Company, 1917. Price, \$6.00.

We always welcome anything from the pen of Dr. Pusey. This, the third edition of his textbook, is a pleasure to read. The personal style of writing and the sense of the actual presence of the genial writer make it the most readable of the late textbooks on diseases of the skin. Moreover, it is up to the minute in all the important recent additions to our knowledge in this specialty. The subject of syphilis is exhaustively treated and it would greatly profit all who practice in the various specialties and still prescribe KI alone in the treatment of this disease to read these pages.

Dr. Pusey's book is well gotten up, the printing clear, the type very readable, the cuts and plates excellent. R. S. W.

**PRACTICAL MATERIA MEDICA AND PRESCRIPTION WRITING** with Illustrations. By Oscar W. Bethea, M.D., Ph.G., F. C. S., Assistant Professor of Materia Medica and Instructor in Prescription Writing, Tulane University of Louisiana. Second Revised Edition. Cloth. Pp. 562. F. A. Davis Company, Philadelphia. 1917. Price, \$4.00.

The book covers this important subject very thoroughly and is suitable for both students and practitioner. One good feature in it is that only the important preparations of a drug are given instead of the innumerable preparations that are so frequently found in a book of this size. The prescription writing is a feature to be highly recommended. The toxicology that is given is good although it seems that more space might have been given to this subject.

There is little if anything new in the materia medica part of the book. The average dose of digitalin is given as  $\frac{1}{400}$  of a grain while it should be  $\frac{1}{6}$  of a grain. It is recommended to give strophanthin hypodermically while it should always be given intravenously as the subcutaneous administration is extremely painful. The best feature of the book is the prescription writing. P. T. B.

**THERAPEUTICS, MATERIA MEDICA AND PHARMACY.** By Samuel O. L. Potter, A.M., M.D., M.R.C.P. Lond., Formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco. Thirteenth Edition Revised and Enlarged. By Elmer H. Funk, M.D., Associate in Medicine, Jefferson Medical College, Philadelphia. P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia. Price, \$6.00.

Funk has revised and enlarged this valuable help to the student and practitioner so that now it is more

useful than ever and contains the most recent advances in its subject-matter. In addition to the usual discussion of drugs, preparation of pharmaceuticals, and the entire subject of materia medica, poisons and their antidotes, therapeutic measures, such important topics as the Allen treatment of diabetes including Joslins' diet table, Cole's serum treatment of pneumonia, and the intra-spinal therapy for neurosyphilis are given brief but succinct consideration. Advances in surgery, for which we may thank the present war, such as the Carrel-Dakin treatment of wounds and the paraffin film treatment of burns are reviewed. Potter's volume is undoubtedly a most convenient desk reference.

S. T. L.

**NOSTRUMS FOR KIDNEY DISEASES AND DIABETES.** Prepared and issued by The Propaganda Department of *The Journal of the American Medical Association*. 47 pages; deals with 34 nostrums; illustrated. American Medical Association, 535 North Dearborn St., Chicago. Paper, 10 cents postpaid.

This is the latest pamphlet issued by The Propaganda Department of *The Journal of the American Medical Association* as part of its work in giving the medical profession and the public the facts regarding different phases of the nostrum evil and quackery. Nostrums for kidney disease and diabetes are grouped together in one pamphlet, not because there is any essential relation between diabetes and kidney disease, but because the average quack makes no distinction between the two conditions and recommends his nostrum indiscriminately for both. It is not necessary to tell physicians that drugs will not cure either kidney disease or diabetes but it is necessary to apprise the public of this fact. Whatever justification there may be for the sale of home remedies for self-treatment, there is no excuse, either moral or economic, for selling preparations recommended for the self-treatment of such serious conditions as diabetes and kidney disease. Every "patent medicine" sold for the cure of these diseases is potentially dangerous and inherently vicious. The pamphlet is an interesting and instructive one to put in the hands of the layman and should be on the desk of every physician.

**DISEASES OF THE STOMACH, INTESTINES AND PANCREAS.**

By Robert Coleman Kemp, M.D., Professor of Gastro-Intestinal Diseases at the Fordham University Medical School. Third edition, revised and enlarged. Octavo of 1096 pages, with 438 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth. \$7 net; half Morocco, \$8.50 net.

The size of the book is illustrative of the tendency to magnify specialties and of the ephemeral nature of such magnification. In this edition Dr. Kemp has paid special attention to the use of the roentgen ray (without cutting out the material devoted to obsolete methods) and to the question of subinfection and autointoxication. But he evidently considers subinfection something still of a side issue; as he does also vagotonia; whereas if he were a real believer in these two theories, three fourths of his book would be discarded. In other words, he has given us a summary of these two modern conceptions of disease merely for the sake of completeness. We are sorry to note that he has not done full justice to the work of Carlson on hunger pains and their mechanism. The illustrations are faulty in perspective in the forepart of the book, and one notes an unpleasant frequency of typographical errors; otherwise, its appearance is attractive. In general, then, the book is a veritable mine of information on the subject in hand. But like all mines it requires a trained miner to select the ore from the refuse.

G. H. H.

**POLIOMYELITIS IN ALL ITS ASPECTS.** By John Ruhräh, M.D., Professor of Pediatrics in the University of Maryland Medical School and the College of Physicians and Surgeons, etc., and Erwin E. Mayer, M.D., First Lieutenant in the Medical Officers Reserve Corps, United States Army, etc. Lea & Febiger: Philadelphia and New York, 1917. Price, \$3.25.

This excellent work with 118 engravings, 2 plates and nearly 300 pages, all well printed and clearly arranged is a valuable addition to our recent knowledge on this subject. It includes what has been thus far learned from the epidemic of the last year. The chapters on the pathology and on the virus of the disease are brief, but summarize probably all that is definitely known.

Of interest is the epidemiology of poliomyelitis, especially that of the New York epidemic of 1916, recounted by Dr. Mathias Nicoll. There are complete chapters on the classification, the paralyses, the symptomatology, diagnosis and prognosis. One half of the book, very properly, is devoted to treatment and prevention of the disease. The greatest advance in the care of cases has been the recent work in the examination of muscles and in muscle training. The suggestions along this line by Lovett are used as a basis for similar work by Ruhräh and Mayer. In their opinion every one who treats the disease should understand and practice this method, which is clearly explained by text and illustrations in this work, as well as in the earlier monograph by Lovett. The after-care of poliomyelitis belongs to the specialist, both physician and nurse, requiring much patience and great skill. In furthering our knowledge of what can be done for children previously neglected, this book is of inestimable value.

F. C. N.

**THE FUNDUS OCULI OF BIRDS, ESPECIALLY AS VIEWED BY THE OPHTHALMOSCOPE.** A Study in Comparative Anatomy and Physiology. By Casey Albert Wood. Illustrated by 145 drawings in the text; also by sixty-one colored paintings prepared for this work by Arthur W. Head, F.Z.S., London, 1917. Published by H. A. Fox, 7 West Madison Street, Chicago. Price, \$15.

We are all more or less familiar with the appearances of the eyegrounds in many of the mammals—especially in man, but this work is the first comprehensive study of the fundus oculi of birds which, as we know, possess the highest type of vision. In man, the general color of the fundus is a bright red; in birds, it is usually a slate gray. In man there is but one fovea and macula region. In birds there are two. In man the retinal vessels are seen coursing to all portions of the fundus; in birds they are absent. The dominating feature of the fundi of birds which is not seen in man is the pecten, a large black or brown mass, like a caterpillar. The pecten is a membranous organ composed of a network of capillaries and covered by a black pigment. One end is attached to the optic nerve and the free end projects a variable distance into the vitreous body. There has been much speculation as to its function.

One hundred and seventeen pages of this work are devoted to introduction, conclusions, collection, selection and preparation of material and bibliography, a review of the anatomy and physiology and then a most comprehensive description of the ophthalmoscopic appearance of the fundus oculi in various orders of birds. The colored plates are exceptionally fine and very instructive. The last one illustrates the fundus of an Indian cobra. One must admire the zeal and courage of the gentleman who gazed into the eye of the cobra. Dr. Wood and his publisher deserve great credit for the creation of this scientific and artistic work.

J. E. J.



# INDEX TO VOLUME XIV

A	PAGE	PAGE	
Acetylsalicylic Acid—N. N. R.....	95	Barnes, Francis M., Jr., and John R. Caulk—Cystoscopic Examination of the Bladder in the Psychoses ..... 329	
Acetylsalicylic Acid, Not Aspirin—Propaganda for Reform .....	96	Bartels, Leo—A Plea for Less Operative Interference in Treatment of Organic Stricture of the Urethra ..... 479	
Acetylsalicylic Acid-Squibb—N. N. R.....	270	Bartlett, Willard—Factors of Safety in Surgery. 116	
Acetylsalicylic Acid, M. C. W.—N. N. R.....	413	Belove, B.—Experimental Measurement of the Bones of the Foot as an Aid to a Better Diagnosis and More Rational Treatment..... 13	
Achylias, Benign and Malignant, Differentiation by Gastric Albumin—Penney.....	522	Best Cough Remedy—Propaganda for Reform.. 143	
Adenoids and Tonsils—McCann.....	164	Betanaphthol Benzoate — Anthony-Hammond Chemical Works, Inc.—N. N. R..... 375	
Agar, Administration of—Propaganda for Reform	462	Betanaphthol Benzoate-Calco—N. N. R..... 500	
Ambrine—Propaganda for Reform.....	270	Betaine Hydrochloride—Propaganda for Reform. 188	
Ambrine and Various Paraffins, Examination of—Propaganda for Reform.....	327	Bile, A Cholagogue—Propaganda for Reform... 461	
Amendment to the Constitution and By-Laws—Editorial .....	177, 214	Bills in the Legislature, Status of—Editorial... 129	
American Association for the Control of Syphilis, Organization of the—Editorial .....	297	Biniodol—Propaganda for Reform..... 143	
American Social Hygiene Association—Editorial. 28		Binnie, J. F., and W. T. Stark—Correction of Deformity Due to Complete Loss of Nose and Most of the Alveolus and Hard Palate..... 415	
Ames, A. C.—Physiologic Therapeutics.....	432	Biologic Products, Dating of—Propaganda for Reform .....	187, 326
Ammonol—Propaganda for Reform.....	542	Biologic Therapy in the War—Propaganda for Reform .....	327
Angiosclerosis of the Retinal Blood Vessels, The Significance of—Moulton .....	401	Black, W. D.—Indications and Methods for Removal of Faucial Tonsils.....	24
Annual Session, Sixtieth—Editorial .....	211, 249	Black's Pulmonic Syrup—Propaganda for Reform 96	
Annual Session, Sixtieth Missouri State Medical Association .....	180, 222, 303	Blackmore, T. A.—The Relation of Nasal and Oral Sepsis to Systemic Disease.....	166
Annual Session, Papers for the—Editorial.....	77	Bladder, Cystoscopic Examination of the, in the Psychoses—Barnes-Caulk .....	329
Annual Session, Sixtieth, Preliminary Program. 180		Blair, Major, Honored — Editorial.....	486
Anterior Poliomyelitis—O'Reilly .....	382	Blair, Vilray P.—The Present Status of the Treatment of Carcinoma of the Mouth in This Locality .....	101
Anticephalalgine—Propaganda for Reform.....	143	Blastomycosis — Frick.....	158
Antipneumococcus Serum, The Status of—Propaganda for Reform.....	47	Blind, Need for More Thorough Examination in Applicants for Admission to Schools for the —Charles-Lamb .....	430
Antiseptic, The Search for the Ideal—Propaganda for Reform .....	95	Blood, Chemical Methods in Diagnosis and Prognosis — Gradwohl.....	235
Appendicitis, An Unusual Complication of—Todd 23		Bones of Foot, Experimental Measurement of the — Belove.....	13
Arch Brand Blood Remedy—Propaganda for Reform .....	376	Bon-Opto—Propaganda for Reform.....	501
Arch Brand Nerve Tonic—Propaganda for Reform .....	376	Books — Editorial.....	441
Army as a Life Vocation for Medical Men, The—Raymond .....	189	Book Reviews—	
Army Medical Officer, The Importance of the Nonsurgical Work of the—Morton.....	393	Annals of Surgery.....	144, 230, 327, 376, 414, 502
Arsenobenzol—Propaganda for Reform.....	46	Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1916.....	217
Armstrong's Croup Ointment—Propaganda for Reform .....	143	Bethea, Oscar W.—Practical Materia Medica and Prescription Writing. F. A. Davis Co. 543	
Arnica, Adulterated—Miscellany .....	255	Brown, Orville Harry—Asthma: Presenting an Exposition of the Non-Passive Expiration Theory. C. V. Mosby Co.....	328
Aspirin-Bayer Omitted from N. N. R.—Propaganda for Reform.....	96	Bucholz, C. Hermann—A Manual of Therapeutic Exercise and Massage. Lea & Febiger. 188	
Aspirin, L. & F.—N. N. R.....	270	Buck, Albert H.—The Growth of Medicine from the Earliest Times to About 1880. Yale University Press .....	272
Asymptomatic Individual with a Positive Wassermann Be Treated, Should the?—Engman.... 145		Bulkley, L. Duncan—Cancer, Its Cause and Treatment. Paul B. Hoeber.....	271
		Burnham, A. C.—A Textbook of First Aid and Emergency Treatment. Lea & Febiger....	502
B			
Baby Week—May 1 to 6—Editorial.....	129		
Bacterins, Everyday Use of—Briegleb.....	170		
Bailey, Harold—Primary Acute Glaucoma.....	8		
Barium Sulphate, P. W. R. for X-Ray Diagnosis —N. N. R.....	95		
Barker's Remedy for Catarrh, Coughs, Colds and Rheumatism—Propaganda for Reform.....	375		
Barnes, Francis M., Jr.—The Value of Early Treatment of Mental Disorders.....	108		
Barnes, Francis M., Jr., and Emil E. Hein—Lumbar Puncture in Alcoholism.....	469		

	PAGE		PAGE
Carman, Russell D.—The Roentgen Diagnosis of Diseases of the Alimentary Canal. W. B. Saunders Co.....	376	Nostrums for Kidney Diseases and Diabetes—Propaganda Department, American Medical Association .....	544
Carter, Herbert S.—Nutrition and Clinical Dietetics. Lea & Febiger.....	464	Ochsner, Edward H.—Physical Exercises for Invalids and Convalescents. C. V. Mosby Co. ....	463
Davis, Frank P.—Impotency, Sterility and Artificial Impregnation. C. V. Mosby Co.....	327	Ombredanne, O., and R. Ledoux-Lebard—Localization and Extraction of Projectiles. Masson et Cie.....	328
Faught, Francis Ashley—Essentials of Laboratory Diagnosis. F. A. Davis & Co.....	144	Potter, Samuel O. L.—Therapeutics, Materia Medica and Pharmacy. P. Blakiston's Son & Co.....	543
Fisher, W. A.—Cataract. Published by the Chicago Ear, Nose and Throat College.....	327	Prince, Norman C.—Roentgen Technic (Diagnostic). C. V. Mosby Co.....	463
Fluhrer, William F.—An Inquiry into the Principles of Treatment of Broken Limbs. Rebman Company .....	144	Pusey, William Allen—Principles and Practice of Dermatology. D. Appleton & Co.....	543
Foster, Matthias Lanckton.—Diagnosis from Ocular Symptoms .....	327	Report from the Department of Pathology and the Department of Clinical Psychiatry, Central Indiana Hospital for the Insane, 1913-1914 and 1914-1915.....	188
Gant, Samuel Goodwin—Constipation, Obstipation and Intestinal Stasis. W. B. Saunders Co.....	48	Ruhräh, John—Poliomyelitis in All Its Aspects. Lea & Febiger.....	544
Gley, E.—The Internal Secretions, Their Physiology and Application to Pathology. Paul B. Hoeber.....	328	Schamberg, Jay Frank—Diseases of the Skin and the Eruptive Fevers. W. B. Saunders Co. ....	48
Gradwohl, R. B. H.—The Newer Methods of Blood and Urine Chemistry. C. V. Mosby Co. ....	464	Spear, Irving J.—A Manual of Nervous Diseases. W. B. Saunders Co.....	414
Hart, T. Stuart—The Diagnosis and Treatment of Abnormalities of Myocardial Function. Rebman Co.....	230	Speed, Kellogg—A Textbook of Fractures and Dislocations. Lea & Febiger.....	96
Jackson, Dennis E.—Experimental Pharmacology. C. V. Mosby Co.....	464	Stimson, Lewis A.—A Practical Treatise on Fractures and Dislocations. Lea & Febiger	463
Kellogg, J. H.—The New Method in Diabetes. Good Health Publishing Co.....	230	Surgery, Gynecology and Obstetrics.....	47, 96, 188, 230, 376, 502
Kemp, Robert Coleman—Diseases of the Stomach, Intestines and Pancreas. W. B. Saunders Co.....	544	Tashiro, Shiro—A Chemical Sign of Life. The University of Chicago Press.....	327
Krause, Prof. Fedor—Textbook of Surgical Operations. Rebman Company.....	272	Tuttle, George M.—Diseases of Children. Lea & Febiger .....	328
Krause, Prof. Fedor—Surgical Operations. Rebman Company.....	463	University of the Philippines Catalogue, The, 1915-1916 .....	48
LePrince, Joseph A.—Mosquito Control in Panama, The Eradication of Malaria and Yellow Fever in Cuba and Panama. G. P. Putnam's Sons .....	48	Vedder, Edw. H.—Sanitation for Medical Officers. Lea & Febiger.....	502
Lewis, Henry Foster—Handbook of Gynecology for Students and Practitioners. C. V. Mosby Co.....	463	Wall, Otto A.—The Prescription Therapeutically, Pharmaceutically, Grammatically and Historically Considered. C. V. Mosby Co. ....	502
Manton, W. P.—The Medical Epitome Series. Lea & Febiger.....	47	Wilkins, Ernest H.—First Lessons in Spoken French for Doctors and Nurses. The University of Chicago Press.....	414
Mayo Clinic, 1916 Collection of Papers of the. W. B. Saunders Co.....	376	Williams, G. R.—Laboratory Methods with Special Reference to the Needs of the General Practitioner. C. V. Mosby Co.....	47
Medical Clinics of Chicago, The. W. B. Saunders Co.....	47	Wood, Casey Albert—The Fundus Oculi of Birds, Especially as Viewed by the Ophthalmoscope. H. A. Fox.....	544
Medical Clinics of North America, The. W. B. Saunders Co.....	414, 543	Young, James K.—Handbook of Anatomy. F. A. Davis Co.....	502
Miscellaneous Nostrums — Medical Institutes. Propaganda Department, American Medical Association .....	463	Borcherdt's Malt Extract with Cascara Sagrada—N. N. R.....	375
Moore, Varanus Alva—The Pathology and Differential Diagnosis of Infectious Diseases of Animals. The Macmillan Co.....	144	Borcherdt's Malt Extract with Creosote—N. N. R.	375
Moorhead, John J.—Traumatic Surgery. W. B. Saunders Co.....	328	Borcherdt's Malt Extract with Cod Liver Oil—N. N. R.....	375
Murphy, John B., Clinics of. W. B. Saunders Co. ....	96	Borcherdt's Malt Olive—N. N. R.....	413
Musser, John H., Jr., and Thomas C. Kelly—A Handbook of Practical Treatment. W. B. Saunders Co.....	463	Bowel, Infectious Diseases of the Lower—Stauffer	395
New and Nonofficial Remedies—1917. American Medical Association.....	271	Briegleb, C. F.—Everyday Use of Bacterins.....	170
Newman, Horatio Hackett—The Biology of Twins (Mammals). University of Chicago Press .....	272	Bromin-Iodin Compound — Propaganda for Reform .....	46
		Brom-I-Phos—Propaganda for Reform.....	376
		Brown, Orville Harry—Nephritis and Endocarditis	349
		Brown's Acacian Balsam—Propaganda for Reform .....	375



	PAGE		PAGE
Brown's Blood Treatment—Propagnada for Reform .....	327	Complement Fixation Test for Tuberculosis and the Wassermann Test in Pulmonary Tuberculosis, The—Ives-Singer .....	284
Brown's "935" Injection (Formerly H. W.)—Propaganda for Reform.....	327	Contract Surgeons, The Need for—Editorial....	405
Buddy, E. P.—Drugs in Treatment of Intestinal Stasis .....	200	Cooper's New Discovery "Quick Relief"—Propaganda for Reform .....	413
Business Bureau, Our.....	248	Cooperation and Loyalty of Medical Men in Local Communities — Overholser.....	113
C		Corpora Lutea (Soluble Extract)—Propaganda for Reform .....	270
Calcium Cacodylate—N. N. R.....	375	Correspondence—	
Calcium Cacodylate Solution—Mulford, Ampule—N. N. R.....	375	Applied for Commission, but Rejected.....	532
Calcium Content of the Blood, The—Propaganda for Reform .....	376	Letter from Dr. Wm. J. Miche.....	494
Calcreose—N. N. R.....	500	Letter from Dr. Veeder (Washington University Base Hospital) .....	407
Camiofen Ointment—N. N. R.....	542	Missouri State Sanatorium .....	493
Cancer, Methods and Results of Educational Work in the Control of—Taussig.....	347	Not a Slacker.....	532
Cancer of the Uterus, Relationship of Laceration of the Mouth of the Uterus to—Funkhouser. .	4	Public Health Nurses.....	532
Carcinoma of the Breast, Preservation of Arm Function After Operations for—Coughlin... 475		Red Cross Insignia.....	532
Carcinoma of the Prostate—Mark-McCarthy....	71	Coughlin, Wm. T.—Preservation of Arm Function After Operations for Carcinoma of the Breast 475	
Carcinoma of the Mouth in This Locality, The Present Status of the Treatment of—Blair..	101	Council on Pharmacy and Chemistry Tests the Therapeutic Value of Drugs, How the—Editorial .....	176
Casta-Flora—Propaganda for Reform.....	96	County General Hospitals, A Plea for the Establishment of Standardized—Nifong .....	343
Castle, Dr. Otto L.—Report of the Necrological Committee on the Death of.....	300	Croxone—Propaganda for Reform.....	143
Castrox—Propaganda for Reform.....	46	Credit Bureau, A—Editorial.....	214
Casualties in the Great War—Editorial.....	441	Credit Bureau and Collecting Department of the St. Louis Medical Society—Miscellany.....	221
Casualties in the Medical Corps of the British Army — Editorial.....	354	Creosote-Delson and Creofos—Propaganda for Reform .....	413
Caulk, John R., and Francis M. Barnes, Jr.—Cystoscopic Examination of the Bladder in the Psychoses .....	329	Cyanocuprol—Propaganda for Reform .....	270
Cesarean Section, Abdominal, for Eclampsia: Report of Two Cases—Dorsett.....	512	Cystoscopic Examination of the Bladder in the Psychoses—Barnes-Caulk .....	329
Chamley, Cancer Quack—Propaganda for Reform	501	D	
Charles, J. W., and Harvey D. Lamb—The Need for More Thorough Examination into the Family History and More Exhaustive Search for Disease in Applicants for Admission to Schools for the Blind.....	430	Dacriocystitis in Infants, Treatment of—Green... 427	
Chiropractor Bill Defeated in the House—Editorial .....	74	Dakin's Hypochlorite Solution—Propaganda for Reform .....	45
Chiropractic Claims, Fallacy of—Seba.....	437	Dander-Off—Propaganda for Reform.....	95
Chiropractic Treatment for Crabs—Editorial....	441	Death Certificates, Accurate—Editorial.....	251
Chlorazene Surgical Cream—N. N. R.....	375	Diarsenol — N. N. R.....	326
Chlorinated Eucalyptol-Dakin — N. N. R.....	501	Dichloramine-T. Abbott—N. N. R.....	500
Chlorinated Soda, Neutral Solution of—Carrel-Dakin—N. N. R.....	95	Dickson, Frank D.—Diagnosis and Treatment of Certain Subacute and Chronic Joint Conditions .....	421
Chlorinated Paraffin Oil-Dakin—N. N. R.....	501	Doctors for the Army—Ten Thousand—Editorial	250
Circumcision for Children, The Two-V Flap—Twyman .....	59	Doctors Enemies of Progress, Some—Miscellany. .	35
Citresia—N. N. R.....	413	Doctors Needed at Once, Seventeen Thousand—Editorial .....	296
Citric Acid and Citrates—Propaganda for Reform .....	271	Dorsett, E. Lee—Abdominal Cesarean Section for Eclampsia: Report of Two Cases.....	512
Classe's Cough Syrup—Propaganda for Reform. 375		Down's Vegetable Balsamic Elixir, N. H.—Propaganda for Reform .....	47
Classe's Great Penetrating Liniment—Propaganda for Reform .....	327	Drug Intoxication—Park .....	292
Clinics of North America—Editorial.....	297	Drugs, Unreliability of Little Used—Editorial... 27	
Collin's Ague Remedy—Propaganda for Reform. 143		Eclampsia, Abdominal Cesarean Section for: Report of Two Cases—Dorsett.....	512
Commission, Applied for, but Rejected—Correspondence .....	532	E	
Complement Fixation in the Diagnosis of Tuberculosis — Editorial.....	212	Editorial—	
		Accurate Death Certificates .....	251
		Amendment to Constitution and By-Laws..177, 214	
		American Social Hygiene Association.....	28
		Baby Week—May 1 to 6.....	129

	PAGE		PAGE
Beware of This Impostor.....	440	Sex Hygiene Exhibit for Recruits at Jefferson Barracks .....	298
Books .....	441	Seventeen Thousand Doctors Needed at Once..	296
Casualties in the Great War.....	441	Sixtieth Annual Session .....	211, 249
Casualties in the Medical Corps of the British Army .....	354	Social Hygiene Movement in Missouri, The; Warm Support by the Kansas City Profession .....	487
Chiropractor Bill Defeater in the House—Other Bills .....	74	Society of Clinical Surgeons.....	214
Chiropractic Treatment for "Crabs".....	441	Springfield Session, The .....	176
Clinics of North America.....	297	Status of Bills in the Legislature.....	129
Complement Fixation in the Diagnosis of Tuberculosis .....	212	Syphilis, Organization of the American Association for the Control of.....	297
Council on Pharmacy and Chemistry Tests the Therapeutic Value of Drugs, How the....	176	Survey of the Mobilization of the Medical Profession .....	440
Credit Bureau, A.....	214	Ten Thousand Doctors for the Army.....	250
Fee for Life Insurance Examinations, A \$5... ..	76	Threats to Draft Physicians Not Warranted..	403
Fitzsimmons, Dr. W. T., Killed in Air Raid..	439	Universal Military Training.....	527
Forty-Ninth General Assembly in Enacting the Missouri Children's Code, Action of the... ..	213	Unreliability of Little Used Drugs.....	27
Foods and Beverages Advertised in This Issue.	252	Wanted — News Items.....	299
General Medical Board Arousing Physicians to Service .....	353	Western Surgical Association Meeting.....	77
German Soldiers Thought America Was on Their Side.....	405	When Abraham Lincoln Swapped Horses.....	488
Gridiron Club, The .....	298	Where Honor Is Due.....	27
Guarding the Soldier's Morals.....	403	Edward's Infant Syrup, Mrs.—Propaganda for Reform .....	413
Honor Roll of County Societies.....	527	Electrozone—Propaganda for Reform .....	95
Hotels and Rates (All European Plan).....	211	Elmore's Rheumatic Goutaline—Propaganda for Reform .....	143
Howell's View, Mr.....	354	Emetin Diarrhea—Propaganda for Reform.....	501
Indiana Raises Dues .....	27	Emetine in Dysentery and Pyorrhea—Propaganda for Reform .....	142
Joining the Medical Reserve Corps.....	426	Endocarditis, Chronic Infective—Sophian.....	514
Jones, Dr. Philip Mills.....	77	Engman, M. F.—Gangrene of the Extremities....	105
Kansas City's Plight.....	524	Engman, Martin F.—Should the Asymptomatic Individual with a Positive Wassermann Be Treated? .....	145
Legislation Affecting the Medical Profession and the Public Health.....	25	Epsom Salt, Flavored—Propaganda for Reform..	375
Major Blair Honored .....	486	Ernst, Edwin C.—The Roentgen Ray in Intestinal Stasis .....	194
Medical Mobilization and the War.....	296	Essence Menthol-Laxene—Propaganda for Reform	375
Medical Officers' Reserve Corps of the U. S. Army .....	177	Ewerhardt, F. W.—Treatment of Intestinal Stasis by Means of Physical Therapy.....	205
Medical Students and Interns May Continue Studies .....	440	Examinations, Free Physical .....	438
Medical Student's Contribution, A.....	441	Eye, Ear and Throat Surgeons into Army Service, May Call—Miscellany .....	408
Meeting of State Committees, Medical Section and General Medical Board.....	486		
Need for Contract Surgeons, The.....	405		
Need for Medical Officers of the Army.....	211		
New Medical Journals .....	131		
New Tuberculosis Journal .....	177		
Optometrists and Chiropractors Unmasked....	295		
Optometry and Other Objectionable Bills Defeated .....	175		
Osteopaths Not Commissioned in the Medical Reserve Corps .....	527		
Papers for the Annual Session.....	77		
Patronize Our Advertisers and You Won't Be Defrauded .....	440		
Preparing the Medical Profession for National Defense .....	212		
Proceed with Caution .....	251		
Program for Springfield Meeting.....	130		
Psychiatric Clinic as an Aid to the Court, The.	75		
Recommends State Survey of Insanity and Feeble-mindedness .....	27		
Safety-Zones of Our City Streets as Determined by the Bacteriologists, The .....	176		
St. Louis Municipal Clinics for Syphilis.....	524		
St. Louis Public Health League.....	251		
Salvarsan, End of the Monopoly on.....	354		
Sargol Concern Fined \$30,000.....	131		
Schleuter, Robert E., M.D.....	295		

## F

Faucial Tonsils, Indications and Methods for Removal of—Black .....	24
Ferric Cacodylate; Iron, Cacodylate—N. N. R....	270
Ferrivine, Intramine and Collosol Iodine—Propaganda for Reform .....	501
Fever, Acute Rheumatic, The Treatment of—Lyter .....	517
Firollyptol Plain and Firollyptol with Creosote—Propaganda for Reform.....	143
Firwein—Propaganda for Reform .....	143
Fitzsimmons, Dr. W. T., Killed in Air Raid—Editorial .....	439
"5 Drops"—Propaganda for Reform.....	96
Foods and Beverages Advertised in This Issue—Editorial .....	252
Foot, Experimental Measurement of the Bones of the — Belove .....	13
Formin Tablets—N. N. R.....	94
Forrest's Juniper Tar—Propaganda for Reform.	375
Freeman's Balsam of Fir Wafers—Propaganda for Reform .....	143



	PAGE		PAGE
Frick, Wm.—Blastomycosis .....	158	Home for Doctors—Miscellany .....	134
Frostilla—Propaganda for Reform.....	326	Honor Roll of County Societies—Editorial.....	527
Fruitatives—Propaganda for Reform.....	462	Honor Where Honor Is Due—Editorial.....	27
Funkhouser, Robert M.—Relationship of Lacera- tion of the Mouth of the Uterus to Cancer of the Uterus .....	4	Hookworm Disease — Thornburgh.....	62
G		Hospitals at Army and National Guard Camps Will Cost \$14,500,000, Thirty-Two — Mis- cellany .....	409
Gangrene of the Extremities—Engman.....	105	Hospitals, A Plea for the Establishment of Stand- ardized County General Hospitals—Nifong..	343
Gardner's Platform, Governor—Miscellany.....	83	Hot Porus Plaster—Propaganda for Reform....	47
Gastro-Intestinal Complications, The Roentgen Rays as a Diagnostic Aid in—Kessler.....	239	Hotels and Rates (All European Plan)—Edi- torial .....	211
Gastron—N. N. R.....	461	Howell's View, Mr.—Editorial.....	354
General Medical Board Arousing Physicians to Service — Editorial.....	353	Hoxie, George Howard—The Adult Thymus and Its Two Types of Dysfunction.....	389
German Soldiers Thought America Was on Their Side — Editorial.....	405	Hyclorite—N. N. R.....	501
Glaucoma, Primary Acute—Bailey.....	8	Hypophysis, The Active Principle of the—Propa- ganda for Reform.....	543
Glycerophosphate Comp. Ampules, 1 Cc. Squibb— Propaganda for Reform.....	142	I	
Goff's Cough Syrup—Propaganda for Reform..	95	Ichthytar—Propaganda for Reform.....	188
Goiter Operations, Factors for Safety and Ulti- mate Results in—Potter.....	506	Impostor, Beware of This—Editorial.....	440
Gonorrheal Pyosalpinx, The Conservative and Surgical Management of—Kerwin.....	243	Inaugural Address of Geo. C. Mosher, M.D., President, Jackson County Medical Society..	126
Gonosan—Propaganda for Reform.....	542	Indiana Raises Dues—Editorial.....	27
Gooch's Mexican Syrup of Wild Cherry, Tar, etc. —Propaganda for Reform.....	375	Infectious Diseases of the Lower Bowel—Stauffer	395
Gradwohl, R. B. H.—Blood Chemical Methods in Diagnosis and Prognosis.....	235	Insanity and Feeble-mindedness, Recommends State Survey of—Editorial.....	27
Green, John, Jr.—Treatment of Dacriocystitis in Infants .....	427	Intestinal Bacteria, Control of—Propaganda for Reform .....	188
Gridiron Club, The—Editorial.....	298	Intestinal Obstruction — Jackson.....	377
Grinstead, W. F.—The Right Thing at the Wrong Time in Vaccine Therapy.....	57	Intestinal Stasis — Anatomy — Pohlman.....	192
H		Intestinal Stasis, Drugs in Treatment of—Buddy.	200
Haines' Golden Treatment—Propaganda for Re- form .....	543	Intestinal Stasis, Influence of on the Nervous System — Hoge.....	199
Halazone-Abbott—N. N. R.....	542	Intestinal Stasis, The Roentgen Ray in—Ernst...	194
Hamilton, Buford G.—Progress in Obstetrics..	465	Intestinal Stasis, The Procto-Sigmoidoscope in the Diagnosis and Treatment of—Soper.....	205
Hay-Fever Pollenin, Mulford—N. N. R.....	413	Intestinal Stasis—Surgery—Reder .....	202
Hayne's Arabian Balsam, Dr.—Propaganda for Reform .....	47	Intestinal Stasis, Treatment of by Means of Physical Therapy — Ewerhardt.....	205
Healer in War and Peace—Miscellany.....	523	Intra-Ocular Tuberculosis and Associated Inflam- matory Lesions of the Upper Respiratory Tract—Schwartz-Meyers .....	276
Health Insurance—Miscellany .....	180	Iocamfen—N. N. R.....	95
Health of Soldiers in Camp Averages Better Than That of Civilians—Miscellany.....	535	Iodine Ointments—Propaganda for Reform.....	462
Heart-Block, Recurrent Transient Complete— Simon-Robinson .....	97	Ipecac, Alcresta—Propaganda for Reform.....	543
Hein, Emil E., and Francis M. Barnes, Jr.—Lum- bar Puncture in Alcoholism .....	469	Iron Cacodylates—Propaganda for Reform.....	45
Hempelmann, L. H.—Trichiniasis with Report of Three Sporadic Cases .....	111	Iron Cacodylate-Mulford, Ampules—N. N. R....	270
Hepatico Tablets—Propaganda for Reform.....	543	Iron Cacodylate-Squibb, Ampoules—N. N. R....	270
Hertzler, Arthur E.—Chronic Induration of the Penis .....	1	Iron Citrate, Green—Propaganda for Reform...	95
Hexamethylenamin in Pyelitis—Propaganda for Reform .....	271	Ives, George, and J. J. Singer—The Complement Fixation Test for Tuberculosis and the Was- sermann Test in Pulmonary Tuberculosis...	284
H. G. C.—Propaganda for Reform.....	143	J	
Hill's Syrup of Tar, Cod-Liver Oil Extract and Menthol—Propaganda for Reform.....	46	Jackson, Jabez N.—Intestinal Obstruction.....	377
Hoge, M. W.—Influence of Intestinal Stasis on the Nervous System.....	199	J. B. L. Cascade Treatment, The—Propaganda for Reform .....	95
Hoff's Prescription, Prof.—Propaganda for Re- form .....	47	Jelly, K-Y Lubricating—Propaganda for Reform.	542
		Johnson's Iodized Extract of Sarsaparilla—Propa- ganda for Reform .....	46
		Joint Conditions, Diagnosis and Treatment of Certain Subacute and Chronic Joint Condi- tions — Dickson.....	421
		Jones, Doctor Philip Mills—Editorial.....	77
		Journals, New Medical—Editorial.....	131

K	PAGE		PAGE
Kanavel, Allen B.—Transplantation of Fat, Fascia and Living Tissue in Surgery.....	333	Medical Officers' Reserve Corps of the U. S. Army — Editorial.....	177
Kaufmann's Sulphur Bitters—Propaganda for Reform .....	462	Medical Officers of the Army, Need for—Editorial	211
Kephalin-Armour—N. N. R.....	375	Medical Preparedness — Miscellany.....	217
Kerwin, Wm.—The Conservative and Surgical Management of Gonorrheal Pyosalpinx.....	243	Medical Reserve Corps, Joining the—Editorial..	526
Kessler, E. H.—The Roentgen Rays as a Diagnostic Aid in Gastro-Intestinal Complications....	239	Medical Student's Contribution, A—Editorial....	441
Kleinschmidt, H. E.—The Prevention of Venereal Diseases .....	288	Medical Students and Interns May Continue Studies — Editorial.....	440
Knorr's Genuine Hien Fong Essence or Green Drops—Propaganda for Reform.....	46	Medical Students and Hospital Interns May Continue Their Studies, Conditions on Which—Miscellany .....	446
Koenig's Nerve Tonic—Propaganda for Reform.	413	Meeting of State Committees, Medical Section and General Medical Board—Editorial.....	486
Kopp's Baby's Friend—Propaganda for Reform.	47	Members, Attention—Miscellany.....	82
K-Y Lubricating Jelly—Propaganda for Reform.	326	Membership Changes...29, 81, 133, 179, 217, 254, .....	302, 360, 443, 493, 531
L		Mental Disorders, The Value of Early Treatment of—Barnes.....	108
Laboratory, The Relation of the, to the Practice of Medicine — Spence.....	69	Mercuric Benzoate—Propaganda for Reform.....	47
Lacteol—Propaganda for Reform.....	47	Mercurialized Serum-Mulford—N. N. R.....	45
Lamb, Harvey D., and J. W. Charles—Need for More Thorough Examination in Applicants for Admission to Schools for the Blind....	430	Mercury Poisoning, Magnesium Oxide, in the Treatment of—Schisler.....	173
Leeches, Active Principle of—Propaganda for Reform .....	188	Mercury Salicylate, Sterile Ampules of—N. N. R	326
Legislation Affecting the Medical Profession and the Public Health—Editorial.....	25	McAlester, A. W.—Report on Medical Education	340
Legislative Notes .....	78	McCann, J. P.—Tonsils and Adenoids.....	164
Letter from Dr. Veeder (Washington University Base Hospital)—Correspondence .....	407	M'Intire Prize—Miscellany.....	179
Life Insurance Examination, A \$5 Fee for—Editorial .....	76	McKay, H. S.—Tubo-Ovarian Infections.....	423
Life Insurance, The Medical Service of—Scholz.	51	Miche, Dr. Wm. J., Letter from—Correspondence	494
Limestone Phosphate—Propaganda for Reform..	462	Military Training, Universal—Editorial.....	527
Lincoln, When Abraham, Swapped Horses—Editorial .....	488	Miscellany—	
Lipiodine-Ciba—N. N. R.....	375	Adulterated Arnica.....	255
Lipsitz, Samuel T.—A Milk-Borne Typhoid Outbreak in Children.....	418	Boobs .....	535
Low's Worm Syrup—Propaganda for Reform... 414		Collection Department and Credit Bureau of the St. Louis Medical Society, The.....	221
Luetin Test, The—Propaganda for Reform.....	271	Condition on Which Medical Students and Hospital Interns May Continue Their Studies .....	446
Lumbar Puncture in Alcoholism—Barnes-Hein...	469	Devastation of Poland by Germany but One Step in "the Prussian System Planned to Conquer and Enslave the World by Force and Brutality" .....	536
Lung-Vita—Propaganda for Reform.....	376	Eye, Ear and Throat Surgeons Into Army Service, May Call.....	408
Lyter, J. Curtis—The Physical Phenomena in Pleural Effusions.....	55	Fleming Angers Physicians.....	535
Lyter, J. Curtis—The Treatment of Acute Rheumatic Fever .....	517	Governor Gardner's Platform.....	83
M		Healer in War and Peace.....	523
Magnesium Oxide in the Treatment of Mercury Poisoning — Schisler.....	173	Health Insurance.....	180
Mag-No Brand Liniment — Propaganda for Reform .....	46	Health of Soldiers in Camp Averages Better than That of Civilians.....	535
Mark, Ernest G., and Marvey E. McCarthy—Carcinoma of the Prostate.....	71	Home for Doctors.....	134
Mathieu's Cough Syrup—Propaganda for Reform	375	Licensed to Practice.....	534
Matusow's Nulfe—Propaganda for Reform....	46	Medical Preparedness.....	217
Mayr's Wonderful Stomach Remedy—Propaganda for Reform.....	46	Members, Attention.....	82
Mecca Compound—Propaganda for Reform....	143	M'Intire Prize.....	179
Medical Education in Missouri an Ideal—Nifong	161	Missouri Physicians Examined for Commissions in Medical Reserve Corps.....	494, 534
Medical Education, Report on—McAlester.....	340	Optometry Bill to Be Introduced in the 1917 General Assembly, New.....	30
Medical Journals, New—Editorial.....	131	Physicians Examined for Commissions in Medical Reserve Corps, Missouri.....	444
Medical Mobilization and the War—Editorial....	296	School Inspection Lags, Why.....	134
		Sexual Hygiene Malfeasance.....	34
		Some Doctors Enemies of Progress.....	35
		Specialists Will Weed Out Men Nervously or Mentally Unfit for Service in Army.....	409
		Step Forward, A.....	82



	PAGE		PAGE
Thirty-Two Hospitals at Army and National Guard Camps Will Cost \$14,500,000.....	409	Gore, Dr. David Clark.....	300
Workmen's Compensation Act Affecting Medical Advisers and Their Fees, Sections in..	33	Kendall, Dr. Wilson A.....	79
Workmen's Compensation Law as It Affects the Physician, The.....	32	Lundy, Dr. Henry C.....	131
Missouri Children's Code, Action of the Forty-Ninth General Assembly in Enacting the — Editorial .....	213	Luyties, Dr. Carl J.....	131
Missouri Physicians Examined for Commission in Medical Reserve Corps—Miscellany.....	444	Miller, Dr. Elijah F.....	214
Missouri State Medical Association Sixtieth Annual Session.....	180, 222, 303	Mitchell, Dr. Henry Clay.....	214
Missouri State Sanatorium—Correspondence....	493	O'Connor, Dr. Cornelius.....	299
Mobilization of the Medical Profession, Survey of the—Editorial.....	440	Porter, Dr. David Rittenhouse.....	79
Morton, Daniel—The Importance of the Nonsurgical Work of the Army Medical Officer....	393	Purselley, Dr. Walter L.....	357
Mosher, Geo. C., President, Jackson County Medical Society, Inaugural Address of.....	126	Rathbone, Dr. F. W.....	78
Moulton, Herbert—The Significance of Angiosclerosis of the Retinal Blood-Vessels.....	401	Steedman, Dr. Isaiah G. W.....	357
Musterole—Propaganda for Reform.....	96	Tandy, Dr. Leonidas W.....	357
Musterole Poisoning—Propaganda for Reform...	501	Todd, Dr. Luther A.....	299
N		Warren, Dr. James T.....	29
Nasal and Oral Sepsis, The Relation of, to Systemic Disease—Blackmore.....	166	O-Do-Cure—Propaganda for Reform.....	47
Nasopharyngeal Disinfection by Hypochlorites—Propaganda for Reform.....	462	O'Donnell, H. S.—Pulmonary Tuberculosis....	434
National Defense, Preparing the Medical Profession for—Editorial.....	212	Ophthalmia Neonatorum, The Nongonorrheal Type of—Thompson.....	7
Neodiarsenol—N. N. R.....	461	Opium Alkaloids on the Uterus, Effect of—Propaganda for Reform.....	187
Neosalvarsan, Fake—Propaganda for Reform....	542	Optochin Hydrochloride — Ethyl-Hydrocupreine Hydrochloride—N. N. R.....	187
Neosalvarsan, Spurious—Propaganda for Reform	501	Optochin—Ethyl-Hydrocupreine—N. N. R.....	187
Nephritis and Endocarditis—Brown.....	349	Optometry Bill to Be Introduced in the 1917 General Assembly, New—Miscellany.....	30
Nervous System, Influence of Intestinal Stasis on the — Hoge.....	199	Optometrists and Chiropractors Unmasked—Editorial .....	295
Neuro Phosphates, Eskay's—Propaganda for Reform .....	542	Optometry and Other Objectionable Bills Defeated — Editorial.....	175
New and Nonofficial Remedies...45, 94, 142, 187, .....	270, 326, 375, 413, 461, 500, 542	Orange Blossom Female Suppositories—Propaganda for Reform.....	95
News Notes.....79, 131, 178, 215, 252, .....	300, 357, 405, 442, 489, 528	O'Reilly, Archer—Anterior Poliomyelitis.....	382
Nifong, Frank G.—Medical Education in Missouri an Ideal.....	161	Osteopaths Not Commissioned in the Medical Reserve Corps—Editorial .....	527
Nifong, Frank G.—A Plea for the Establishment of Standardized County General Hospitals..	343	Overholser, M. P.—Cooperation and Loyalty of Medical Men in Local Communities.....	113
"Nikalgin"—Propaganda for Reform.....	542	P	
Non-Specific Protein Reaction in Specific Therapy, Significance of—Sophian.....	231	Paraffin Films—Propaganda for Reform.....	270
Nose, Correction of Deformity Due to Complete Loss of, and Most of the Alveolus and Hard Palate — Binnie-Stark.....	415	Park, Henry C.—Drug Intoxication.....	292
Nostrums, More Misbranded—Propaganda for Reform .....	46, 542, 543	Parmint—Propaganda for Reform.....	462
Nurses, Public Health—Correspondence.....	532	Parresine—N. N. R.....	326
Nutrolactis and Goat's Rue—Propaganda for Reform .....	327	Pasteur Antirabic Preventive Treatment—N. N. R.	413
O		Patronize Our Advertisers and You Won't Be Defrauded — Editorial.....	440
Obstetric Résumé, An—VanEman.....	503	Paul, Thomas M.—A Case of Perinephritic Abscess with Spontaneous Recovery.....	21
Obstetrics, Progress in—Hamilton.....	465	Payne's New Discovery—Propaganda for Reform	413
Obituary—		Payne's Quick Relief—Propaganda for Reform..	413
Barnes, Dr. Rollin H.....	299	Penis, Chronic Induration of the—Hertzler.....	1
Castle, Dr. Otto L.....	300	Penney, D. L.—Benign and Malignant Achylia Differentiated by Gastric Albumin.....	522
Connell, Dr. J. E.....	442	Pepsodent—Propaganda for Reform.....	271
Elliott, Dr. James Henry.....	489	Perinephritic Abscess with Spontaneous Recovery, A Case of—Paul.....	21
		Pertussis Bacterin—Mulford—N. N. R.....	45
		Pharmacology of Stovaine—Propaganda for Reform .....	271
		Phenolsulphonephthalein Test, The—Propaganda for Reform.....	143
		Physician a Moral Force, The True—Welch....	273
		Physicians Examined for Commissions in Medical Reserve Corps, Missouri—Miscellany.....	494
		Physical Examination of Five Hundred Young Men, Result of—Price.....	20
		Physiologic Therapeutics—Ames.....	432
		Pierce's Anuric Tablets—Propaganda for Reform	501

	PAGE	S	PAGE
Pil. Cascara Compound—Robins—Propaganda for Reform .....	96	Safety in Surgery, Factors of—Bartlett.....	116
Piperazin and Other Organic Urate Solvents—Propaganda for Reform.....	270	Safety-Zones of Our City Streets as Determined by the Bacteriologists—Editorial.....	176
Pituitary Gland, Preparations of the—Propaganda for Reform.....	326	St. Louis Public Health League—Editorial.....	251
Plant Juice—Propaganda for Reform.....	45	Salvarsan, Another Shortage of—Propaganda for Reform.....	187
Pleural Effusions, The Physical Phenomena in—Lyter .....	55	Salvarsan, End of the Monopoly on—Editorial..	354
Pncumovita—Propaganda for Reform.....	143	Salvarsan and Neosalvarsan, Toxicity of—Propaganda for Reform.....	95
Pohlman, A. G.—Intestinal Stasis—Anatomy....	192	Salvarsan Patent, Abolition of the—Propaganda for Reform.....	271
Poisoning by Irish Potatoes, A Case of—Roberts	247	Salvarsan in Tabes with Optic Atrophy—Propaganda for Reform.....	326
Poland Wine Bitters—Propaganda for Reform..	413	Salvarsan, Toxicity of—Propaganda for Reform.	46
Poliomyelitis, Anterior—O'Reilly.....	382	Sanatorium, Missouri State—Correspondence....	493
Potter, Caryl—Factors for Safety and Ultimate Results in Goiter Operations.....	506	Sargol Concern Fined \$30,000—Editorial.....	131
Price, Horace T.—Result of Physical Examination of Five Hundred Young Men.....	20	Sargol—Propaganda for Reform.....	143
Proceed with Caution—Editorial.....	251	Sargol Case, The—Propaganda for Reform....	188
Procto-Sigmoidoscope in the Diagnosis and Treatment of Intestinal Stasis, The—Soper.....	205	Saunders, E. W.—Two Cases of Idiopathic Tetanus Due to Decayed Teeth.....	485
Program for Springfield Meeting—Editorial....	130	Sayman's Vegetable Liniment—Propaganda for Reform .....	46
Propaganda for Reform..45, 94, 142, 187, 270, 326, .....	375, 413, 461, 501, 542	Schisler, Edwin—Magnesium Oxide in the Treatment of Mercury Poisoning.....	173
Prostate, Carcinoma of the—Mark-McCarthy....	71	Schisler, Edwin—Typhoid Perforation, with Report of a Case on the 116th Day with Recovery .....	398
Protein Indigestion in Infants—Zahorsky.....	484	Schlueter, Robert E., M.D.—Editorial.....	295
Protein Indigestion in the Infant—Zahorsky....	520	Scholz, S. B., Jr.—The Medical Service of Life Insurance .....	51
Psychiatric Clinic as an Aid to the Court, The—Editorial .....	75	School Inspection Lags, Why—Miscellany.....	134
Public Health Nurses—Correspondence.....	532	Schuh's White Mixture—Propaganda for Reform	143
Q		Schuh's Yellow Injection—Propaganda for Reform .....	143
Q-Ban Hair Color Restorer—Propaganda for Reform .....	95	Schwartz, F. O., and M. M. Meyers—Intra-Ocular Tuberculosis and Associated Inflammatory Lesions of the Upper Respiratory Tract .....	276
Quaker Herb Extract—Propaganda for Reform..	413	Seba, John D.—Fallacy of Chiropractic Claims..	437
Quaker Oil of Balm—Propaganda for Reform..	413	Secretary's Duties, Some of the, and His Part in Maintaining an Interesting County Society —Roberts .....	351
Quinine Injection—Propaganda for Reform.....	47	Serum Treatment of Pneumonia—Propaganda for Reform .....	462
R		Serums and Vaccines, Standardization of—Propaganda for Reform.....	461
Radway's Sarsaparillian—Propaganda for Reform	46	Sex Hygiene Exhibit for Recruits at Jefferson Barracks — Editorial.....	298
Rawleigh's Ru-Mex-Oil—Propaganda for Reform	375	Sexual Hygiene Malfeasance—Miscellany.....	34
Raymond, Thomas U.—The Army as a Life Vocation for Medical Men.....	189	Shoop's, Dr., Diphtheria Remedy—Propaganda for Reform.....	46
Red Cross Insignia—Correspondence.....	532	Simon, Selig, and G. Canby Robinson—Recurrent Transient Complete Heart-Block.....	97
Reder, F.—Intestinal Stasis—Surgery.....	202	Simpson's, Dr., Vegetable Compound—Propaganda for Reform.....	96
Redintol—Propaganda for Reform.....	414	Siomine—N. N. R.....	326
Renne's Pain Killing Oil—Propaganda for Reform	143	Sixtieth Annual Session—Editorial..	211, 249
Retinal Blood-Vessels, The Significance of Angiosclerosis of the—Moulton.....	401	Slacker, Not a—Correspondence.....	532
Rheume Olum—Propaganda for Reform.....	188	Smallpox, Vaccination in—Vessels.....	67
Roberts, E. H.—A Case of Poisoning by Irish Potatoes .....	247	Smith's Kidney Remedy—Propaganda for Reform	46
Roberts, J. F.—Some of the Secretary's Duties and His Part in Maintaining an Interesting County Society.....	351	Snyder's Bitters—Propaganda for Reform.....	96
Robinson, G. Canby and Selig Simon—Recurrent Transient Complete Heart-Block.....	97	Social Hygiene Movement in Missouri, The; Warm Support by the Kansas City Profession — Editorial.....	487
Roentgen Ray in Intestinal Stasis, The—Ernst..	194	Society of Clinical Surgeons—Editorial.....	214
Roentgen-Rays as a Diagnostic Aid in Gastro-Intestinal Complications—Kessler.....	239		
Root Juice Compound—Propaganda for Reform.	413		
Russell Emulsion and Russell Prepared Green Bone—Propaganda for Reform.....	376		
Russell's White Drops—Propaganda for Reform	143		
Russia Salve—Propaganda for Reform.....	47		



Society Proceedings—	PAGE	PAGE
Adair County Medical Society.....	89	Surgeons Club of St. Louis, The.....36, 259, 446
Bates County Medical Society.....90, 140, 185,		Tri-County Association.....
.....228, 325, 459, 498		Vernon County Medical Society.....
Benton County Medical Society.....	90, 267	Washington University Medical Society.....84,
Boone County Medical Society.....	539	.....137, 183, 225, 257, 365
Buchanan County Medical Society..41, 90, 140,		Wayne County Medical Society.....
.....185, 228, 267, 372, 459, 498, 539		Webster County Medical Society.....45, 269, 500
Callaway County Medical Society.....	373	Wright County Medical Society..142, 270, 412, 541
Cape Girardeau County Medical Society...41,		Sodium Cacodylate in Syphilis—Propaganda for
.....140, 228, 373, 498		Reform .....
Cass County Medical Society.....42, 141, 228		Sodium Chloride and Citrate-Squibb, Tablets—
Clay County Medical Society..42, 91, 141, 229,		N. N. R.....
.....268, 325, 410, 459, 498		Sodium Hypochlorite-Mulford, Concentrated Solu-
Clinton County Medical Society.....	91	tion—N. N. R.....
County Society Honor Roll, 1917...35, 83, 135,		Sofos—N. N. R.....
.....180, 222, 255, 303, 363, 410, 446, 495		Soldiers' Morals, Guarding the—Editorial.....
Gasconade-Maries-Osage County Medical So-		Soper, H. W.—The Procto-Sigmoidoscope in the
ciety.....42, 185, 268, 373, 499, 539		Diagnosis and Treatment of Intestinal Stasis
Gentry County Medical Society.....	540	Sophian, Abraham—Chronic Infective Endo-
Greene County Medical Society.....43, 186, 460		carditis .....
Grundy County Medical Society.....	91	Sophian, Abraham—Significance of Non-Specific
Henry County Medical Society.....92, 141, 229,		Protein Reaction in Specific Therapy.....
.....410, 460, 499		Specialists Will Weed Out Men Nervously or
Holt County Medical Society.....	268	Mentally Unfit for Service in Army—Mis-
Howell County Medical Society.....43, 269		cellany .....
Howard County Medical Society.....	229	Specific Therapy, Significance of Non-Specific
Jasper County Medical Society.....	186	Protein Reaction in—Sophian.....
Johnson County Medical Society.....374, 499		Spence, Elbert L.—The Relation of the Labora-
Laclede County Medical Society.....	460	tory to the Practice of Medicine.....
Lafayette County Medical Society.....	43	Splenomegaly, A Case of the Gaucher Type of
Lawrence-Stone County Medical Society...43,		with Splenectomy—Veeder-Clopton.....
.....325, 460		Springfield Meeting, Program for—Editorial....
Lewis County Medical Society.....43, 230		Springfield Session, The—Editorial.....
Livingston County Medical Society.....	44	Stark, W. T., and J. F. Binnie—Correction of
Macon County Medical Society.....	44	Deformity Due to Complete Loss of Nose
Marion County Medical Society.....93, 186		and Most of the Alveolus and Hard Palate. 415
Mercer County Medical Society.....	93	Stauffer, W. H.—Infectious Diseases of the Lower
Missouri Society of Medical Secretaries, Ninth		Bowel .....
Annual Meeting of.....224, 363		Stella-Vitae—Propaganda for Reform.....
Missouri State Medical Association, Sixtieth		Step Forward, A—Miscellany.....
Annual Session.....180, 222, 303		Sterling Violet Ray Generator—Propaganda for
Moniteau County Medical Society.....	93	Reform .....
New Madrid County Medical Society.....	186	Sterline's Asthma and Hay Fever Remedy—
Newton County Medical Society.....187, 230, 540		Propaganda for Reform.....
Pemiscot County Medical Society.....	93	Sterline's Bronchial Elixir—Propaganda for Re-
Perry County Medical Society.....	540	form .....
Pettis County Medical Society.....141, 374, 411		Stricture of the Urethra, A Plea for less Operative
Pike County Medical Society.....	44	Interference in Treatment of Organic
Platte County Medical Society.....44, 186, 500		—Bartels .....
Polk County Medical Society.....93, 269, 411		Stuart's, Dr., Specific Drops—Propaganda for
Pulaski County Medical Society.....	94	Reform .....
Putnam County Medical Society.....	374	Succus Cineraria Maritima—Propaganda for
Ralls County Medical Society.....	461	Reform .....
Ray County Medical Society.....	269	Sulfo-Selene-Walker—Propaganda for Reform..
Ste. Genevieve County Medical Society.....	45	Surgery, Factors of Safety in—Bartlett.....
St. Clair County Medical Society.....	412	Swain's Panacea—Propaganda for Reform.....
St. Louis County Medical Society.....	94	Swift's Sure Specific—"S. S. S."—Propaganda
St. Louis Medical Society..35, 83, 135, 181, 224,		for Reform.....
.....255, 324, 495, 538		Swayne's Panacea—Propaganda for Reform....
Schuyler County and Fifth District Medical		Syke's Sure Cure for Catarrh—Propaganda for
Societies, Joint Meeting.....	89	Reform .....
Schuyler County Medical Society.....500, 541		Synthetics, American Made—Propaganda for Re-
Scott County Medical Society.....142, 269, 412		form .....
		Syphilis, Organization of the American Associa-
		tion for the Control of—Editorial.....
		Syphilis, St. Louis Municipal Clinics for—Edi-
		torial .....



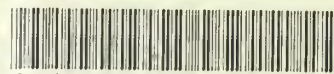












3 2044 103 071 254